The substitute specification contains no new matter.

IN THE ABSTRACT:

Please amend the abstract as indicated by the clean copy in Appendix B and the marked-up copy in Appendix C, attached hereto.

IN THE TITLE:

Please delete the original title and substitute therefor the following new title:

-Dynamo-Electric Drive Unit Controlled Compound Power System-.

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Formalities

The claims, specification, and abstract have been revised to place the application in proper U.S. format and correct various grammatical and idiomatic errors.

Because the changes to the specification and abstract are all formal in nature, and the amendments to the claims are clearly supported by the original specification and drawings, it is respectfully submitted that the changes do not involve new matter.

2. **ELECTION OF SPECIES**

The applicant elects the Species of Fig. 2.

Claims 65-99 read on the elected species.

Claims 65-92 are generic.

Having thus complied with each of the requirements made in the Official Action, early and favorable action on the merits is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

Date: March 28, 2003

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APPENDIX A
(Clean Copy Of Amended Claims)

65. (New) A speed-controlled dynamo-electric compound system, comprising:

at least one primary dynamo-electric unit arranged to rotate a shaft;

at least one centrifugal clutch having a driven side connected to the shaft and a driving side connected to an engine, wherein rotation of said dynamo-electric unit at a preset speed causes said driven side of the clutch to engage said driving side and thereby connect said engine to said shaft;

a load connected to said shaft through an output device;

a secondary dynamo-electric unit coupled to said engine;

an electrical energy storage device connected between said secondary dynamo-electric unit and said primary dynamo-electric unit; and

a controller,

wherein when said primary dynamo-electric unit is supplied with electricity from said electrical energy storage device and caused to rotate at below said preset speed, said dynamo-electric device drives said shaft to selectively drive said output device, and when said primary dynamo-electric unit is caused to rotate at above said preset speed, said driven side of said centrifugal clutch engages said driving side, thereby connecting said engine to said primary dynamo-electric unit to carry out at least one of the following functions:

(1) the primary dynamo-electric device starts said engine;

(2) the load is driven by said engine;

(3) the engine drives said secondary dynamo-electric unit to operate as a generator for driving the primary dynamo-electric unit to drive the load jointly with the engine;

(4) the engine drives said secondary dynamo-electric unit to operate as a generator for charging said electrical energy storage device;

(5) the primary dynamo-electric unit is supplied with electricity from said electrical energy storage device to drive said load jointly with said engine.

66. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said output device comprises an output transmission mechanism.

67. (New) A speed-controlled dynamo-electric compound system as claimed in claim 66, wherein said output transmission mechanism comprises a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, and a planetary transmission.

68. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said output device comprises an output clutch.

69. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said output device comprises an output transmission mechanism and an output clutch.

70. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a steering shaft connected to said output device, and a differential gear set connected to said steering shaft.

71. (New) A speed-controlled dynamo-electric compound system as claimed in claim 70, further comprising a plurality of differential steering shafts connected to said differential gear set.

72. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a transmission mechanism connected between said centrifugal clutch and said engine.

73. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said transmission mechanism connected between said centrifugal clutch and said engine is a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, a variable steering transmission, a multistage variable transmission, and a stageless variable transmission.

74. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said controller includes a central control unit, a drive control device connected to said primary and secondary dynamo-electric units, and a manual control interface, said drive control device being arranged to control a speed of said primary dynamo-electric unit, and further to control whether said primary and secondary dynamo-electric units function as motors, generators, or one of each.

75. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said engine is an internal combustion engine.

76. (New) A speed-controlled dynamo-electric compound system as claimed in claim 75, wherein said engine further includes start-up and operation speed control devices.

77. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said engine further includes peripheral interface devices including a fuel system, air inlet and exhaust system, an ignition system, and a cooling system.

78. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said primary dynamo-electric unit has a characteristic that a speed of said primary dynamo-electric unit becomes higher when a load becomes smaller.

79. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said primary dynamo-electric unit is arranged to execute amperage control of input electric energy to generate kinetic energy of rotation that increases torque as the load increases.

80. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said primary dynamo-electric unit is selected from the group consisting of an AC, DC, brush, brushless, synchronous, asynchronous, inner rotor, and outer rotator motor/generator.

81
80. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said secondary dynamo-electric unit is selected from the group consisting of an AC, DC, brush, brushless, synchronous, asynchronous, inner rotor, and outer rotator motor/generator.

82
81. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said secondary dynamo-electric unit is a starter motor for said engine.

83
82. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a transmission mechanism for connecting said primary dynamo-electric unit to said shaft.

84 83
83. (New) A speed-controlled dynamo-electric compound system as claimed in claim 82, wherein said transmission mechanism connected between said primary dynamo-electric unit and said shaft is a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, a variable steering transmission, a multistage variable transmission, and a stageless variable transmission.

85 83
84. (New) A speed-controlled dynamo-electric compound system as claimed in claim 82, wherein said output device comprises an output transmission mechanism connected between said shaft and said load.

86 85
85. (New) A speed-controlled dynamo-electric compound system as claimed in claim 84, wherein said output transmission mechanism comprises a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, and a planetary transmission.

87 83
86. (New) A speed-controlled dynamo-electric compound system as claimed in claim 82, wherein said output device comprises an output clutch.

88 83
~~87~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~82~~, wherein said output device comprises an output transmission mechanism and an output clutch.

89
~~88~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a transmission mechanism for connecting said engine to said secondary dynamo-electric unit.

90 89
~~89~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~88~~, wherein said transmission mechanism for connecting said engine to said secondary dynamo-electric unit is a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, a variable steering transmission, a multistage variable transmission, and a stageless variable transmission.

91 89
~~90~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~88~~, further comprising a transmission mechanism connected between said centrifugal clutch and said engine.

92 91
~~91~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~90~~, wherein said transmission mechanism connected between said centrifugal clutch and said engine is a transmission selected from the group consisting of a fixed speed ratio transmission, a variable speed ratio transmission, a variable steering transmission, a multistage variable transmission, and a stageless variable transmission.

93
~~92~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said system carries out each of said functions in response to manual input to said controller.

94
~~93~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a second centrifugal clutch arranged to disengage said load when said first centrifugal

clutch transmits power from said primary dynamo-electric device to said engine and a speed of said engine is below a preset value.

95 93
~~93~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~92~~, wherein said first and second centrifugal clutches form a three-layer structure including an inner layer, and intermediate layer, and an outer layer, and wherein said intermediate layer is connected to said engine and said inner layer is connected to said shaft, said inner layer expanding outwardly to engage said intermediate layer when said primary dynamo-electric unit exceeds said preset speed, and said intermediate layer acting outwardly to engage and inner surface of said outer layer when a speed of said engine exceeds said preset value.

96 95
~~94~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~93~~, further comprising a transmission mechanism connected between said engine and said intermediate layer.

97 95
~~95~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~93~~, further comprising a transmission mechanism connected between said outer layer and said primary dynamo-electric unit.

98 97
~~96~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~95~~, further comprising an output clutch connected between said outer layer and said shaft.

99 98
~~97~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~96~~, wherein said output clutch is selected from the group consisting of clutches controlled by manual, mechanical, electromagnetic, hydraulic, and centrifugal force.

100 99
~~98~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~97~~, further comprising a second output clutch connected between said shaft and said load.

101 100
99. (New) A speed-controlled dynamo-electric compound system as claimed in claim 98, wherein said second output clutch is selected from the group consisting of clutches controlled by mechanical, manual, electromechanical, hydraulic, and centrifugal force.

102
100. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising an output clutch connected between the driven said of said centrifugal clutch and said load.

103
101. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, further comprising a second centrifugal clutch, wherein said first and second centrifugal clutches form a three-layer structure including an inner layer, and intermediate layer, and an outer layer, and wherein said intermediate layer is connected to said shaft and said inner layer is connected to said engine, said inner layer expanding outwardly to engage said intermediate layer when a speed of said engine exceeds said preset value, and said intermediate layer acting outwardly to engage and inner surface of said outer layer when said primary dynamo-electric unit exceeds said preset speed.

104 103
102. (New) A speed-controlled dynamo-electric compound system as claimed in claim 101, further comprising a transmission mechanism connected between said engine and said inner layer.

105 103
103. (New) A speed-controlled dynamo-electric compound system as claimed in claim 101, further comprising a clutch connected between said outer layer and said engine, said outer and inner layers being fixed to each other.

106 105
104. (New) A speed-controlled dynamo-electric compound system as claimed in claim 103, wherein said output clutch is selected from the group consisting of clutches controlled by manual, mechanical, electromagnetic, hydraulic, and centrifugal force.

107
105. (New) A speed-controlled dynamo-electric compound system as claimed in claim 65, wherein said first and second centrifugal clutches are independent structures connected by a transmission mechanism.

108
106. (New) A speed-controlled dynamo-electric compound system, comprising:

at least one primary dynamo-electric unit arranged to rotate a shaft;

at least one centrifugal clutch having a driven side connected to the shaft and a driving side connected to an engine, wherein rotation of said dynamo-electric unit at a preset speed causes said driven side of the clutch to engage said driving side and thereby connect said engine to said shaft;

a load connected to said shaft through an output device;

a plurality of secondary dynamo-electric units connected to said output device;

an electrical energy storage device connected to said primary dynamo-electric unit; and

a controller,

wherein when said primary dynamo-electric unit is supplied with electricity from said electrical energy storage device and caused to rotate at below said preset speed, said dynamo-electric device drives said shaft to selectively drive said output device, and when said primary dynamo-electric unit is caused to rotate at above said preset speed, said driven side of said centrifugal clutch engages said driving side, thereby connecting said engine to said primary dynamo-electric unit to carry out at least one of the following functions:

(1) the primary dynamo-electric device starts said engine;

(2) the load is driven by said engine;

(3) the engine drives said secondary dynamo-electric units to operate as a generator for driving the primary dynamo-electric unit to drive the load jointly with the engine;

(4) the engine drives said secondary dynamo-electric units to operate as a generator for charging said electrical energy storage device;

(5) the primary dynamo-electric unit is supplied with electricity from said electrical energy storage device to drive said load jointly with said engine.

109 108
~~107~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, wherein said output device comprises an output transmission mechanism.

110 108
~~108~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, wherein said output device comprises an output clutch.

111 108
~~109~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, wherein said output device comprises an output transmission mechanism and an output clutch.

112 108
~~110~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, further comprising a steering shaft connected to said output device, and a differential gear set connected to said steering shaft.

113 112
~~111~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~110~~, further comprising a plurality of differential steering shafts connected to said differential gear set.

114 113
~~112~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~111~~, wherein said secondary electrical generators are connected to said differential steering shafts

115 108
~~113~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, further comprising a transmission mechanism connected between said centrifugal clutch and said engine.

116 109
~~114~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, wherein said controller includes a central control unit, a drive control device connected to said primary and secondary dynamo-electric units, and a manual control interface, said drive control device being arranged to control a speed of said primary dynamo-electric unit, and further to

control whether said primary and secondary dynamo-electric units function as motors, generators, or one of each.

117 108
115. (New) A speed-controlled dynamo-electric compound system as claimed in claim 106, further comprising a transmission mechanism for connecting said primary dynamo-electric unit to said shaft.

118 108
116. (New) A speed-controlled dynamo-electric compound system as claimed in claim 106, further comprising a transmission mechanism for connecting said engine to said secondary dynamo-electric unit.

119 118
117. (New) A speed-controlled dynamo-electric compound system as claimed in claim 116, further comprising a transmission mechanism connected between said centrifugal clutch and said engine.

120 108
118. (New) A speed-controlled dynamo-electric compound system as claimed in claim 106, wherein said system carries out each of said functions in response to manual input to said controller.

121 108
119. (New) A speed-controlled dynamo-electric compound system as claimed in claim 106, further comprising a second centrifugal clutch arranged to disengage said load when said first centrifugal clutch transmits power from said primary dynamo-electric device to said engine and a speed of said engine is below a preset value.

122 121
120. (New) A speed-controlled dynamo-electric compound system as claimed in claim 119, wherein said first and second centrifugal clutches form a three-layer structure including an inner layer, and intermediate layer, and an outer layer, and wherein said intermediate layer is connected to said engine and said inner layer is connected to said shaft, said inner layer expanding outwardly to engage said intermediate layer when said primary dynamo-electric unit exceeds said

preset speed, and said intermediate layer acting outwardly to engage and inner surface of said outer layer when a speed of said engine exceeds said preset value.

123 122
121. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~120~~, further comprising a transmission mechanism connected between said engine and said intermediate layer.

124 122
122. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~120~~, further comprising a transmission mechanism connected between said outer layer and said primary dynamo-electric unit.

125 124
123. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~122~~, further comprising an output clutch connected between said outer layer and said shaft.

126 125
124. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~123~~, further comprising a second output clutch connected between said shaft and said load.

127 108
125. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, further comprising an output clutch connected between the driven said of said centrifugal clutch and said load.

128 108
126. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~106~~, further comprising a second centrifugal clutch, wherein said first and second centrifugal clutches form a three-layer structure including an inner layer, and intermediate layer, and an outer layer, and wherein said intermediate layer is connected to said shaft and said inner layer is connected to said engine, said inner layer expanding outwardly to engage said intermediate layer when a speed of said engine exceeds said preset value, and said intermediate layer acting outwardly to engage and inner surface of said outer layer when said primary dynamo-electric unit exceeds said preset speed.

129 128
127. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~126~~, further comprising a transmission mechanism connected between said engine and said inner layer.

130 128
~~128~~. (New) A speed-controlled dynamo-electric compound system as claimed in claim ~~126~~, further comprising a clutch connected between said outer layer and said engine, said outer and inner layers being fixed to each other.

APPENDIX B
(Clean Copy Of Amended Abstract)

A dynamo-electric drive unit controlled compound system includes one dynamo-electric unit, a primary and a secondary dynamo-electric unit, or more than two dynamo-electric units incorporated with an engine or other rotating device, and one or more control units including a centrifugal clutch, one-way transmission mechanism, output clutch, or related transmission mechanism, a manual control interface, a central controller and a storage device to provide a specific control pattern and to execute the operation of specific compound power function by selection among the control units and control of drive control device operation.

APPENDIX C
(Marked-Up Copy Of Amended Abstract)

[An drive dynamo-electric unit controlled compound system comprised of one dynamo-electric unit or a primary and a secondary dynamo-electric units or more than two dynamo-electric unit units incorporated with engine or other rotating moment device, and one unit or more than one unit of centrifugal clutch, one-way transmission mechanism or output clutch or related transmission mechanism and manual control interface, central controller and storage device to create specific control pattern and to execute the operation of specific compound power function by selection among those units and control of drive control device operation.] A dynamo-electric drive unit controlled compound system includes one dynamo-electric unit, a primary and a secondary dynamo-electric unit, or more than two dynamo-electric units incorporated with an engine or other rotating device, and one or more control units including a centrifugal clutch, one-way transmission mechanism, output clutch, or related transmission mechanism, a manual control interface, a central controller and a storage device to provide a specific control pattern and to execute the operation of specific compound power function by selection among the control units and control of drive control device operation.

S.N. 09/982,178
GAU: 3681
Ex'r: S. Estremsky

OIPE JC37
MAR 2 8 2003
PATENT & TRADEMARK OFFICE

TITLE: ~~DRIVE~~ DRIVE DYNAMO-ELECTRIC UNIT CONTROLLED COMPOUND POWER SYSTEM

OIPE JC37
2 8 2003
TRADEMARK OFFICE

BACKGROUND OF THE INVENTION

(a) Field of the Invention

The present invention is ~~related~~ relates to a ~~drive~~ dynamo-electric drive unit controlled compound system ~~comprised of~~ including one dynamo-electric unit, ~~or~~ a primary and a secondary dynamo-electric unit ~~units~~, or more than two dynamo-electric ~~unit~~ units incorporated with an engine or other rotating ~~moment~~ device, and one ~~unit~~ or more ~~than one unit of~~ control units including a centrifugal clutch, one-way transmission mechanism, ~~or~~ output clutch, or related transmission mechanism, ~~and~~ a manual control interface, a central controller and a storage device to ~~create~~ provide a specific control pattern and to execute the operation of a specific compound power function by selection among ~~those~~ the control units, and control of drive control device operation.

(b) Description of the Prior Art:

The present invention by ~~incorporating~~ combines an engine, ~~to~~ a primary dynamo-electric unit, and a transmission mechanism to create new functions ~~as supplementary to a prior art of~~ that are in addition to those created by incorporating an engine ~~to~~ with a single dynamo-electric unit ~~under~~ as disclosed in US Patent No. 5,644,200 invented by the same inventor ~~of this~~ as the present application.

SUMMARY OF THE INVENTION

The primary purpose of the present invention is to provide ~~an drive~~ a dynamo-electric drive unit controlled compound system ~~comprised of~~ including one dynamo-electric unit, ~~or~~ a primary and a secondary dynamo-electric unit, ~~units~~ or more than two dynamo-electric ~~unit~~ units incorporated with an engine or other rotating ~~moment~~ device, and one ~~unit~~ or more ~~than one unit of~~ control units including a

centrifugal clutch, one-way transmission mechanism, ~~or~~ output clutch, or related transmission mechanism, ~~and~~ a manual control interface, a central controller, and a storage device to create a specific control pattern and to execute the operation of a specific compound power function by selection among ~~those~~ the control units and control of drive control device operation.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a view of a first preferred embodiment of the present invention having an application system with ~~an~~ a centrifugal clutch as the drive control;

Fig. 2 is a view of a second preferred embodiment of the present invention having an application system with ~~an~~ a centrifugal clutch as the drive control;

Fig. 3 is a view of a third preferred embodiment of the present invention having an application system with ~~an~~ a centrifugal clutch as the drive control;

Fig. 4 is a view of a fourth preferred embodiment of the present invention having an application system with ~~an~~ a centrifugal clutch as the drive control;

Fig. 5 is a schematic view showing that a first dynamo-electric unit from the fourth preferred embodiment of the present invention is replaced by two independent dynamo-electric unit units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 6 is a view showing that the first preferred embodiment of the present invention is provided with a controllable clutch;

Fig. 7 is a view showing that the first preferred embodiment given in Fig. 6 is provided with an output clutch;

Fig. 8 is a schematic view of a preferred embodiment showing

the primary dynamo-electric unit given in Fig. 7 is further replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 9 is a view of a first preferred embodiment of the present invention having ~~an~~ a centrifugal clutch as the drive control provided opposite to the acting direction;

Fig. 10 is a view of a second preferred embodiment of the present invention having ~~an~~ a centrifugal clutch as the drive control provided opposite to the acting direction;

Fig. 11 is a view of a third preferred embodiment of the present invention having ~~an~~ a centrifugal clutch as the drive control provided opposite to the acting direction;

Fig. 12 is a view of a fourth preferred embodiment of the present invention having ~~an~~ a centrifugal clutch as the drive control provided opposite to the acting direction;

Fig. 13 is a schematic view showing that in the fourth preferred embodiment of the present invention, the primary dynamo-electric unit is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side two output shafts from the differential gear unit;

Fig. 14 is a view showing that the preferred embodiment the present invention given in Fig. 15 is provided with an output clutch;

Fig. 15 is a view showing that the preferred embodiment the present invention given in Fig. 14 is provided with an put clutch;

Fig. 16 is a view showing that the primary dynamo-electric t of the preferred embodiment of the present invention given Fig. 15 is further replaced by two independent

electric unit units respectively provided by the side of output shafts from the differential gear unit;

Fig. 17 is a view showing that the primary dynamo-electric unit and a steering shaft on a load side of the first preferred embodiment from Fig. 9 share the same structure;

Fig. 18 is a view showing that an additional secondary dynamo-electric unit is directly coupled to the engine steering shaft or ~~engaging~~ engaged in mutual transmission with the transmission mechanism;

Fig. 19 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 17 is replaced by two independent dynamo-electric unit units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 20 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 18 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 21 is a view showing ~~that~~ an automatic transmission mechanism provided between the engine and the drive shaft of the present invention;

Fig. 22 is a first preferred embodiment of ~~an application system of~~ the present invention taken from Fig. 1 that has a one-way transmission mechanism connected in series with the driven ~~drawing~~ side of the centrifugal clutch as the drive control;

Fig. 23 is a second preferred embodiment of ~~an application system of~~ the present invention taken from Fig. 2 that has a one-way transmission mechanism connected in series with the

~~drawing~~ side of the centrifugal clutch as the drive control;

Fig. 24 is a third preferred embodiment of ~~an application system of~~ the present invention taken from Fig. 3 that has a one-way transmission mechanism connected in series with the driven ~~drawing~~ side of the centrifugal clutch as the drive control;

Fig. 25 is a fourth preferred embodiment of ~~an application system of~~ the present invention taken from Fig. 4 that has a one-way transmission mechanism connected in series with the driven side of the centrifugal clutch as the drive control;

Fig. 26 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 25 is replaced by two independent dynamo-electric unit units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 27 is a view showing that the preferred embodiment of the present invention given in Fig. 22 is provided with a controllable clutch;

Fig. 28 is a view showing that the preferred embodiment of the present invention given in Fig. 27 is provided with an output clutch;

Fig. 29 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 28 is replaced by two independent dynamo-electric unit units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 30 is a view showing a first preferred embodiment of an application system of the preferred embodiment given in Fig. 22 ~~that has the~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch

ed in ~~opposite~~ opposition to the acting direction and a one-way ..smission mechanism with a selected steering direction;

Fig. 31 is a view showing a second preferred embodiment of ~~an application system of~~ the preferred embodiment given in Fig. 23 ~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 32 is a view showing a third preferred embodiment of ~~an application system of~~ the preferred embodiment given in Fig. 24 ~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 33 is a view showing a fourth preferred embodiment of an application system of the preferred embodiment given in Fig. 25 ~~that has~~ in which the drive control is comprised of an centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 34 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 33 is replaced by two independent dynamo-electric unit units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 35 is a view showing that the preferred embodiment of the present invention given in Fig. 30 is provided with a controllable clutch;

Fig. 36 is a view showing that the preferred embodiment of the present invention given in Fig. 35 is provided with an output clutch;

Fig. 37 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 36 is replaced

two independent dynamo-electric unit units respectively
ovided by the side of two output shafts from the differential
ar unit;

Fig. 38 is a first preferred embodiment of an application
stem taken from Fig. 1 ~~changed to that~~ in which a one-way transmission
chanism is provided between a steering shaft ~~having~~ incorporated with the engine
~~corporated to~~ on the driven ~~drawing~~ side of the centrifugal
utch and ~~the~~ an output shaft ~~incorporated by~~ or the drive ~~drawing~~
de of the centrifugal clutch;

Fig. 39 is a second preferred embodiment of an application
stem taken from Fig. 2 ~~changed to that~~ in which a one-way transmission
chanism is provided between a steering shaft ~~having~~ incorporated with the engine
~~corporated to~~ on the driven drawing side of the centrifugal
utch and ~~the~~ an output shaft ~~incorporated by~~ or the drive ~~drawing~~
de of the centrifugal clutch;

Fig. 40 is a third preferred embodiment of an application
stem taken from Fig. 3 ~~changed to that~~ in which a one-way transmission
chanism is provided between a steering shaft ~~having~~ incorporated with the engine
~~corporated to~~ on the driven drawing side of the centrifugal
utch and ~~the~~ an output shaft ~~incorporated by~~ or the drive ~~drawing~~
de of the centrifugal clutch;

Fig. 41 is a fourth preferred embodiment of an application
stem taken from Fig. 4 ~~changed to that~~ in which a one-way transmission
chanism is provided between a steering shaft having the engine
~~corporated to~~ on the driven drawing side of the centrifugal
utch and ~~the~~ an output shaft ~~incorporated by~~ or the drive ~~drawing~~
de of the centrifugal clutch;

Fig. 42 is a view showing that the primary dynamo-electric
it in the preferred embodiment taken from Fig. 41 is replaced
two independent dynamo-electric ~~unit~~ units respectively

provided by the side of two output shafts from the differential gear unit;

Fig. 43 is a view showing that the preferred embodiment of the present invention given in Fig. 38 is provided with a controllable clutch;

Fig. 44 is a view showing that the preferred embodiment of the present invention given in Fig. 43 is provided with an output clutch;

Fig. 45 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 44 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 46 is a view showing a first preferred embodiment of an application system of the preferred embodiment given in Fig. 38 ~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 47 is a view showing a second preferred embodiment of an application system of the preferred embodiment given in Fig. 39 ~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 48 is a view showing a third preferred embodiment of an application system of the preferred embodiment given in Fig. 40 ~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal clutch provided in ~~opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 49 is a view showing a ~~fourth preferred embodiment of an application system~~ variation of the preferred embodiment given in

~~that has~~ in which the drive control is comprised of ~~an~~ a centrifugal ~~provided in opposite~~ opposition to the acting direction and a one-way transmission mechanism with a selected steering direction;

Fig. 50 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 49 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 51 is a view showing that the preferred embodiment of the present invention given in Fig. 46 is provided with a controllable clutch;

Fig. 52 is a view showing that the preferred embodiment of the present invention given in Fig. 51 is provided with an output clutch;

Fig. 53 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 52 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 54 is a view of a first preferred embodiment of an application system of the prevent invention having a one-way transmission mechanism as the drive control provided between the load side steering shaft and the engine power source;

Fig. 55 is a view of a second preferred embodiment of an application system of the prevent invention having a one-way transmission mechanism as the drive control provided between the load side steering shaft and the engine power source;

Fig. 56 is a view of a third preferred embodiment of an application system of the prevent invention having a one-way transmission mechanism as the drive control provided between

the load side steering shaft and the engine power source;

Fig. 57 is a view of a fourth preferred embodiment of an application system of the prevent invention having a one-way transmission mechanism as the drive control provided between the load side steering shaft and the engine power source;

Fig. 58 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 57 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

Fig. 59 is a view showing that the preferred embodiment of the present invention given in Fig. 54 is provided with a controllable clutch;

Fig. 60 is a view showing that the preferred embodiment of the present invention given in Fig. 59 is provided with an output clutch;

Fig. 61 is a view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 60 is replaced by two independent dynamo-electric ~~unit~~ units respectively provided by the side of two output shafts from the differential gear unit;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention ~~related~~ relates to a ~~drive~~ dynamo-electric drive unit controlled compound system including one dynamo-electric unit, ~~or~~ a primary and a secondary dynamo-electric unit, ~~units~~ or more than two dynamo-electric ~~unit~~ units incorporated with an engine or other rotating moment device, and one ~~unit~~ or more ~~than one unit of~~ control units such as a centrifugal clutch, one-way transmission mechanism, ~~or~~ output clutch, or related transmission mechanism

and manual control interface, central controller and storage device to create specific control pattern and to execute the operation of specific compound power function by selection among those units and control of drive control device operation. ~~is essentially comprised of the following units:~~ The system of the invention includes

centrifugal clutches ~~FC101 and FC102,~~ comprised of one centrifugal clutch unit FC101 (Fig. 1) or ~~of~~ two centrifugal clutch units of FC101 and FC102 ~~being~~ engaged to each other or sharing a same structure (Fig. 2), or ~~of~~ a double-acting centrifugal clutch having two independent centrifugal clutch units coupled to each other by means of a transmission device. The structure includes three layers: an inner layer, an intermediate layer and an outer layer. ~~within, the~~ The inner layer contains a drive power-locking unit to act outwardly ~~outward~~ when the centrifugal force reaches a preset value and is incorporated ~~to draw each other~~ with an output shaft. The intermediate layer incorporates ~~incorporated to~~ an engine (ICE101 and) has a coupling surface or an inner circumference and a drive power-locking unit on its outer side to act outwardly ~~outward~~ when the centrifugal force reaches its preset value so to couple to a power-locking inner circumference ~~from~~ of the outer layer ~~to~~ and thereby execute the function of an output clutch. The ~~and the~~ outer layer also ~~incorporated to~~ is connected to the output shaft so to temporarily cut off linkage to a load when the engine runs at low rpm.

One ~~One~~-way transmission mechanism SWC101 is comprised of various known mechanisms that execute one-way transmission to be directly provided or jointly provided with other transmission ~~mechanism~~ mechanisms between a primary dynamo-electric unit E101 and a steering shaft S103 driven by ~~an~~ engine ICE101 ~~for the steering shaft S103 driven by the engine ICE101 to~~

to transmit power at a pre-selected rotation direction in relation to the rotation part of the primary dynamo-electric unit E101~~, on the contrary, to~~ and also execute idling to interrupt the power transmission. That is, if the engine ICE101 drives clockwise (CW), the steering shaft S102 transmits power to the primary dynamo-electric unit E101; and if engine ICE101 is driven counterclockwise (CCW), ~~to interrupt the~~ power transmission is interrupted. Meanwhile, if the primary dynamo-electric unit E101 drives counterclockwise (CCW), the steering shaft S102 drives the engine ICE101 in an opposite direction; and if unit E101 is driven clockwise (CW), ~~to interrupt the~~ power transmission is interrupted. ~~With the selection~~ Selection of the direction for the one-way transmission mechanism SWC101 selects the rotation direction ~~of~~ and whether the transmission to be continued or interrupted between the engine ICE101 and the primary dynamo-electric unit E101~~is selected as the case may be;~~

The one-way transmission mechanism SWC101 is independently provided or provided at the same time ~~with~~ as the centrifugal clutch FC101 ~~for~~ to cause the system to ~~indicate~~ exhibit various compound power characteristics~~as~~. As required, the relative locations between the one-way transmission mechanism SWC101~~and~~, the centrifugal clutch FC101 ~~has the centrifugal clutch FC101~~ provided ~~at where~~ close to the side of the steering shaft S103 of the engine ICE101, and the one-way transmission mechanism provided ~~at where~~ close to the side of the primary dynamo-electric unit E101 or the centrifugal clutch~~, or has~~. Alternatively, both ~~of~~ the centrifugal clutch FC101 and the one-way transmission mechanism SWC101 may be provided ~~at where~~ between the steering shaft S103 of the engine ICE101 and the rotation part of the primary dynamo-electric unit, while both of the centrifugal clutch FC101 and the one-way transmission

mechanism SWC101 ~~is~~ are separately provided or ~~sharing~~ share the same structure.

~~primary~~ Primary dynamo-electric unit E101 essentially ~~functioning~~ functions as a motor and also as a secondary generator. ~~related to a secondary motor of~~ It may use a series excitation or ~~pilot~~ compound ~~type secondary dynamo-electric unit with dynamo-electric unit characteristics~~ winding having the characteristic that the speed becomes higher when the load gets smaller, or an AC or DC brush or brushless device that executes amperage control (including control of constant current) ~~for the input electric energy~~ to generate kinetic energy of rotation ~~mechanical~~ that increases torque as the load increases ~~or to other~~ The dynamo-electric device may also take the form of another AC or DC, brush or brushless, synchronous or asynchronous, inner ~~rotor~~ or outer rotor ~~rotation~~ dynamo-electric unit.

~~secondary~~ Secondary dynamo-electric unit E102 also essentially ~~functioning~~ functions as a generator and ~~also as a~~ secondary motor, comprised of an inner ~~rotor~~ or outer rotor rotation dynamo-electric unit that generates AC or DC using a brush or brushless structure to provide synchronous or asynchronous energy and ~~to~~ convert kinetic energy of rotation ~~mechanical~~ into electric energy.

~~engine~~ Engine ICE101 may be comprised of various known internal combustion ~~engine and its~~ engines, related start-up and operation speed control ~~device~~ devices, and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system, to directly drive the steering shaft S103 or by way of a fixed speed ratio, ~~or~~ variable speed ratio, or variable steering transmission mechanism or planetary transmission mechanism T104.

~~the~~ The fixed, ~~or~~ variable speed ratio, ~~or~~ variable steering, ~~transmission~~ or planetary transmission mechanism T104 is an

optional mechanism comprised of various known coaxial or non-coaxial ~~transmission~~ transmissions, e.g. a fixed ~~ratio~~ speed ratio, or stage or stageless variable transmission mechanism, comprised of a gear set, belt gear set, ~~or~~ sprocket gear set, or power-locking gear set.

The optional fixed, ~~or~~ variable speed ratio, ~~or~~ variable steering ~~transmission~~ or planetary transmission mechanisms T101, T102, T103 ~~: a structure to executed~~ includes structures arranged to execute variable speed ratio or steering ~~function~~ functions, comprised of a gear set, chain and sprocket gear set, power-locking gear set, planetary gear set, or other ~~stage~~ staged or variable, manual or automatic shift transmission ~~mechanisms. the transmission mechanism is optional;~~ mechanisms.

Optional output clutches CL101, CL301 ~~: an optional mechanism~~ are comprised of output clutches connected in series between the steering shaft S104 on the load side and the load, and are controlled by manual, mechanical, electromagnetic or hydraulic, or centrifugal force.

Optional differential gear set DG ~~: an optional mechanism~~ is comprised of a gear or power-locking gear arranged to receive ~~rotation~~ rotational kinetic energy inputted by a steering shaft S105 for driving two differential steering shafts S105R and S105L.

~~storage~~ Storage discharging device ESD101 is comprised of a (dis)chargeable secondary battery or super capacitor.

~~central~~ Central control unit CCU101 is comprised of mechanical-electric or solid-state electronic ~~device~~ devices, or a digital or analog central control circuit comprised of a micro-processor and ~~its~~ related software ~~to be~~ subject to operation and setup ~~by~~ via a manual control interface M101 to control the operation of the system.

~~drive~~ Drive control device CD101 is controlled by the manual control

interface M101 and the central control unit CCU101 to operate both dynamo-electric units ~~functioning~~ as motors ~~to~~ and execute control of startup, stop, speed variation or positive/negative rotation and torque, or as generators to control power generation voltage, amperage, frequency and power performance, charging ~~electric~~ energy ~~inputted~~ to the storage discharging device ESD101, and electric energy ~~outputted~~ from the storage discharging device ESD101. ~~and~~ Finally, manual control interface M101 ~~related to~~ is a digital or analog manual control interface comprised of mechanical-electric or solid-state electronic ~~circuit~~ circuitry to control the operation of the system via the central control unit CCU101 by manual operation.

By combining those devices and mechanisms described above, the present invention executes some ~~of~~ or all of the following functions:

(1) the primary dynamo-electric unit ~~functioning~~ functions as a starting motor, ~~draws~~ and causes the activating side of the centrifugal clutch to close ~~it~~ and start the engine.

(2) the secondary dynamo-electric unit, ~~functioning~~ also can function as a starting motor, ~~starts~~ to start the engine;

(3) once the engine starts, the load is driven by controlling the operation of the centrifugal clutch, ~~or the~~ a manual, mechanical, ~~or~~ electromagnetic, or hydraulic force controlled power-locking ~~or~~ clutch, or a hydraulic force coupled type clutch;

(4) in addition to driving the load, the running engine continues to ~~draw~~ cause the secondary dynamo-electric unit to operate as a generator for driving the primary dynamo-electric unit to jointly drive the load or to

charge the storage discharging device ESD101;

(5) the engine ~~is running~~ runs to drive the load while the primary dynamo-electric unit ~~functioning~~ functions as a motor with electric energy supplied from the storage discharging device ESD101 to jointly drive the load;

(6) during the down time of the primary dynamo-electric unit, the engine runs to drive the secondary dynamo-electric unit to function as a generator so to charge the storage discharging device ESD101 or output electric energy to other loads;

(7) the running engine drives the secondary dynamo-electric unit to generate power for driving the primary dynamo-electric unit to further drive the load, ~~or~~ to simultaneously ~~charging~~ charge the batteries, or to output electric energy to other loads;

(8) the primary dynamo-electric unit drives the load at low speed as controlled by the electric energy supplied from the storage discharging device via a drive control device while the engine is not running;

(9) the electric energy drive ~~status including the generation~~ includes regenerative braking either by the primary or the secondary dynamo-electric units, or both at the same time, the engine ~~becomes~~ becoming a braking resistance ~~as drawn by the closed~~ when the centrifugal clutch closes once the sliding speed exceeds the preset value; or

(10) any related functions provided by other structures as described above.

Additional to providing those functions as described in the preceding subparagraphs (1) through (10), preferred embodiments of the application system with drive control by

the centrifugal clutch FC101 essentially operates in the following patterns A1, A2 and A3:

A1: with the system on standby and the engine not running, the manual control interface M101 ~~is started~~ initiates acceleration ~~on~~ of the system by starting the primary dynamo-electric unit E101, ~~is started to execute~~ which executes low speed drive operation to drive the load until the centrifugal clutch FC101 is closed, ~~to start~~ at which time the engine ~~is drawn by the centrifugal clutch FC101 for~~ starts and causes the secondary dynamo-electric unit E102 ~~either engages in generation output or stops~~ to generate electricity or stop generation as required.

Once the manual control interface M101 is executing acceleration on the throttle of the engine and a centrifugal clutch FC102 is provided for the system, the centrifugal clutch FC102 is closed to ~~draw~~ cause the steering shaft S104 on the load side ~~thus~~ to drive the load; or the closed centrifugal clutch FC101 is used to ~~draw~~ cause the steering shaft S104 on the load side to further drive the load.

As the manual control interface M101 increases to accelerate the throttle, the engine rpm is further promoted to increase the power to drive the load, at which time the primary dynamo-electric unit E101 may stop ~~transmitted~~ transmitting power or convert to function as a generator, or ~~to~~ may input electric energy to operate as a motor to provide parallel ~~pilot~~ kinetic energy for the engine ICE101.

A2: With the system on standby, the engine also is on standby at low speed or is driving a peripheral load, e.g. an air conditioner or secondary air pump, and the secondary dynamo-electric unit E102 ~~executes generation output~~ generates electricity or stops generation.

When the manual control interface M101 starts to accelerate the system, the primary dynamo-electric unit E101 is activated

to execute drive operation at low speed to drive the load.

Once the manual control interface M101 causes ~~performs~~ acceleration ~~drive on~~ of the primary dynamo-electric unit E101 by controlling the electric energy supplied from the storage discharging device ESD101 or a generator, the manual control interface M101 synchronously accelerates the throttle on the engine. ~~if~~ If the system is provided with a centrifugal clutch FC102, the engine rpm increases until the centrifugal clutch FC102 is closed to ~~draw~~ cause the steering shaft S104 on the load side, ~~thus~~ to drive the load, or the centrifugal clutch FC102 connects the engine in parallel to drive the load when the primary dynamo-electric unit E101 accelerates until the centrifugal clutch FC101 is closed.

As the manual control interface M101 increases to accelerate the throttle, the engine rpm is further promoted to increase the power to drive the load, and the primary dynamo-electric unit E101 may stop ~~transmitted~~ transmitting power or convert to function as a generator, or ~~to~~ input electric energy to operate as a motor to provide parallel ~~pilot~~ kinetic energy for the engine ICE101.

A3: With the system on standby, the engine also is on standby at constant speed or is driving a peripheral load, e.g. an air conditioner or secondary air pump, and the secondary dynamo-electric unit E102 ~~executes generation output~~ generates electricity or stops generation;

When the manual control interface M101 starts to accelerate the system by controlling the electric energy supplied from the storage discharging device ESD101 or a generator, the manual control interface M101 synchronously accelerates the throttle on the engine. ~~if~~ If the system is provided with a centrifugal clutch FC102, the engine rpm increases until the centrifugal

clutch FC102 is closed to ~~draw~~ cause the steering shaft S104 on the load side, ~~thus~~ to drive the load, or the centrifugal clutch FC102 connects the engine in parallel to drive the load when the primary dynamo-electric unit E101 accelerates until the centrifugal clutch FC102 is closed.

Based on the basic configuration and the application of its operation, multiple preferred embodiments of a compound power system controlled by a drive dynamo-electric unit speed of the present invention are described as follows:

A. Figs. 1 through 8 shows applications of the system ~~by~~ having the centrifugal clutch FC101 as the drive control for the compound power system controlled by a drive dynamo-electric unit speed of the present invention.

Fig.1 shows a first preferred embodiment of the present invention having a centrifugal clutch as the drive control, essentially comprised of a centrifugal clutch FC101 provided between a steering shaft S103 driven by an engine ICE101 and another steering shaft on the load side S104 for controlling both ~~of~~ the steering shaft S103 and another steering shaft S104 on the load side to couple or interrupt transmission. ~~Within,~~ The ~~the~~ steering shaft S103 driven by the engine ICE101 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 while another steering shaft S104 on the load side is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so that once the steering shaft S104 on the load side reaches the preset rpm, it ~~drives to close~~ closes the centrifugal clutch FC101, thus ~~to draw~~ causing the steering shaft S103 ~~which is~~ to be directly driven by the engine ICE101, to be driven by engine ICE101 or through a fixed ~~speed ratio~~ or variable speed ratio, ~~or~~ device a variable steering device, or a planetary transmission mechanism T104. The steering shaft S104 on the load side is

provided to drive the load, and a fixed ~~speed ratio~~ or variable speed ratio, or variable steering, transmission mechanism T102 is ~~provided~~ connected to the steering shaft S104 on the load side to engage in mutual transmission with a primary dynamo-electric unit E101.

The ~~the~~ load side steering shaft S104 is directly outputted to the load, or alternatively, to an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being directly outputted to the load ~~or~~, as required, to ~~execute~~ provide a single shaft output through a fixed speed ratio ~~or~~, variable speed ratio, or variable steering transmission, or a planetary transmission mechanism T103, and then through a steering shaft S105, through an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L.

The ~~the~~ engine ICE101 is comprised of ~~various~~ any of a variety of known internal combustion ~~engine~~ engines, and ~~its~~ related start-up, ~~and~~ operation speed control ~~device~~, and peripheral interface devices including a fuel system, air inlet ~~&~~ and exhaust system, ignition system and cooling system, to directly drive the steering shaft S103, or by way of ~~to drive shaft S103~~ a fixed ~~speed ratio~~ or variable speed ratio, or variable steering transmission mechanism, or a planetary transmission mechanism T104.

The ~~the~~ fixed or variable speed ratio, ~~or~~ transmission variable steering transmission, or planetary transmission mechanism T104 is an optional mechanism comprised of various known coaxial or non-coaxial ~~transmission~~ transmissions, e.g. a fixed speed ratio ~~speed or~~ multi stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set.

The primary dynamo-electric unit E101 essentially functions as a motor and also as a secondary generator. It may use series excitation or a compound type winding having the characteristic that the speed becomes higher when the load gets smaller, or an AC or DC brush or brushless device that executes amperage control (including control of constant current) to generate kinetic energy of rotation that increases torque as the load increases. The dynamo-electric devices may also take the form of another AC or DC, brush or brushless, synchronous or asynchronous, inner or outer rotor dynamo-electric unit. The primary dynamo-electric unit E101 is coupled to the load side steering shaft S104 and to the drive side of the centrifugal clutch FC101 by means of a fixed or variable speed ratio transmission, variable steering transmission, or planetary transmission mechanism T102.

The secondary dynamo-electric unit E102, also essentially functions as a generator and as a secondary motor, comprised of an inner or outer rotor rotation dynamo-electric unit that generates AC or DC, using a brush or brushless structure to provide synchronous or asynchronous energy and convert kinetic energy of rotation into electric energy. The secondary dynamo-electric unit E102 is coupled to the steering shaft S103 driven by the engine ICE101 and the driven side of the centrifugal clutch FC102 by means of a fixed or variable speed ratio transmission, variable steering transmission, or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 2 shows a second preferred embodiment of the present invention having an application system with a centrifugal clutch as the drive control. ~~essentially comprised of having connected in series a~~ A centrifugal clutch FC101 is connected in series to ~~then~~ another centrifugal clutch FC102 between the steering shaft S103 and the drive load side steering shaft S104 of the engine ICE101. The double acting centrifugal clutches FC101 and FC102 may be ~~form to each other or~~ integrated into a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101, the inner layer being connected ~~incorporated~~ to the load side steering shaft S104 ~~drawn to each other is~~ and provided with a drive power-locking unit to act outwardly ~~outward~~ when the centrifugal force reaches a preset value. ~~the~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. ~~the~~ The intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the engine having its inner side provided with a circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value performs the functions as an output

clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. ~~and the~~ The outer layer is also incorporated ~~to~~ with the load side steering shaft S104 so to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 is either directly driven by the engine or driven by the engine through a fixed ~~speed ratio~~ or variable speed ratio transmission, ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T104, ~~by the engine~~ and is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 and the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so as to ~~forthwith~~ close the centrifugal clutch FC101 and further ~~to draw~~ cause the steering shaft S103 to be driven by the engine ICE101 when the load side steering shaft S104 reaches its preset rpm. Alternatively, a fixed speed ~~ratio~~ or variable speed ratio transmission, ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T102 ~~is~~ may be provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit.

[P] ~~the~~ The load side steering shaft S104 is directly outputted to the load, or alternatively, to an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being outputted to the load, or, as required, to ~~execute~~ provide a single shaft output through a fixed ~~speed ratio~~ or variable speed ratio transmission, variable steering transmission, or planetary transmission mechanism T103, and then through a steering shaft S105, or through an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L.

[P] ~~the~~ The engine ICE101 is comprised of ~~various~~ any known internal

combustion engine and ~~its~~ related start-up, ~~and~~ operation speed control, ~~device~~ and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system, to directly drive the steering shaft S103 or by way of fixed ~~speed ratio~~ or variable speed ratio ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T104;

~~the~~ fixed or variable speed ratio ~~or~~ variable steering transmission, or planetary transmission mechanism T104, an optional mechanism comprised of various known coaxial or non-coaxial ~~transmission~~, e.g. a fixed ratio ~~speed or~~ stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set.

~~the~~ primary dynamo-electric unit E101 essentially ~~functioning~~ as a motor and also as a secondary generator, ~~related to a secondary motor of~~ series excitation or ~~pilot~~ compound type ~~secondary dynamo-electric unit with dynamo-electric unit characteristics~~ that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, ~~or to other~~ AC or DC, brush or brushless, synchronous or asynchronous, inner ~~rotor~~ or outer rotor ~~rotation~~ dynamo-electric unit. ~~the~~ primary dynamo-electric unit E101 is coupled to the load side steering shaft S104 and to the drive ~~draw~~ side of the centrifugal clutch FC101 by means of a fixed or variable speed ratio ~~or~~ variable steering transmission, or planetary

transmission mechanism T102, ~~and~~

the secondary dynamo-electric unit E102 essentially ~~functioning~~ as a generator and ~~also~~ as a secondary motor, comprised of an inner ~~rotor~~ or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless synchronous or asynchronous energy to convert kinetic energy of rotation ~~mechanical~~ into electric energy. ~~the~~ secondary dynamo-electric unit E102 is coupled to the steering shaft S103 driven by the engine ICE101and the driven ~~draw~~ side of the centrifugal clutch FC102 by means of a fixed or variable speed ratio ~~or~~ variable steering transmission, or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function. ~~It~~ also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 3 shows a third preferred embodiment of the present invention having an application system with a centrifugal clutch as the drive control, ~~essentially comprised of having coupled to~~ in which an intermediate steering shaft S102 is coupled to the fixed ~~speed ratio~~ or variable speed ratio ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T102. ~~the~~ The power-locking coupling surface on the outer circumference of

the double-acting centrifugal clutch FC101 and the outer circumference power-locking surface of the double-acting centrifugal clutch FC102 ~~in~~ functin in the same manner as in the preferred embodiment as illustrated in Fig. 2. Those double-acting centrifugal clutches are comprised of two units of centrifugal clutches FC101 and FC102 incorporated to ~~each other forming~~ form a three-layer structure containing ~~the~~ inner, ~~the~~ intermediate and ~~the~~ outer layers. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101, ~~the~~ The inner layer and the inner side of the intermediate layer incorporated ~~to~~ with the intermediate steering shaft S102 ~~drawn to each other~~ are ~~is~~ provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value, ~~the~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102, ~~the~~ The intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the engine having its inner side provided with circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs~~ to perform the ~~functions as~~ functin of an output clutch in combination with the power-locking circumferential coupling surface on the inner side of the outer layer, ~~and the~~ The outer layer is also incorporated ~~to~~ with the intermediate steering shaft S102 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 is either directly driven or driven through a fixed ~~speed ratio~~ or variable speed ratio, ~~or~~ transmission variable steering transmission mechanism, or planetary transmission mechanism T104 by the engine and is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the intermediate steering shaft S102 being coupled to the drive ~~draw~~ side

of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further to cause ~~draw~~ the steering shaft S103 to be driven by the engine ICE101 when the intermediate steering shaft S102 reaches its preset rpm.

The intermediate steering shaft S102 is directly outputted to the load, or alternatively, to an output clutch CL301 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being outputted to the load, or, as required, to execute single shaft output through a fixed ~~speed ratio~~ or variable speed ratio transmission, variable steering transmission, or planetary transmission mechanism T103, then through a steering shaft S105, or through an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L. ~~The~~ The additional output clutch CL301is provided between the intermediate steering shaft S102 and the load side steering shaft S104 with both steering shafts driven by the power-locking coupling surfaces on the inner and outer circumferences of the double-acting centrifugal clutches FC101 and FC102.

~~The~~ The engine ICE101 is comprised of any of various known internal combustion ~~engine~~ engines and ~~its~~ related start-up, ~~and~~ operation speed control, ~~device~~ and peripheral interface devices including fuel system, air inlet ~~&~~ and exhaust system, ignition system and cooling system to directly drive the steering shaft S103, or is driven by way of a fixed ~~speed ratio~~ or variable speed ratio transmission, ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T104.

~~The~~ The fixed or variable speed ratio transmission, ~~or~~ variable steering transmission, or planetary transmission mechanism T104 is an

optional mechanism comprised of various known coaxial or non-coaxial ~~transmission~~ transmissions, e.g. a fixed ratio speed ~~or~~ multi stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set.

~~the~~ The primary dynamo-electric unit E101 essentially ~~functioning~~ functions as a motor and also as a secondary generator, as described above. ~~related to a secondary motor of series excitation or pilot~~ compound type secondary dynamo-electric ~~unit~~ with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner ~~rotor or outer rotor rotation dynamo-electric unit;~~ In this embodiment, the primary dynamo-electric unit E101is coupled to the intermediate steering shaft S102, which in turn is incorporated to the centrifugal clutch FC101 by means of a fixed or variable speed ratio ~~or~~ transmission, variable steering transmission, or planetary transmission mechanism T102. ~~and~~

- the secondary dynamo-electric unit E102 also essentially ~~functioning~~ functions as a generator and ~~also as a~~ secondary motor, as described above. ~~comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy~~ to convert kinetic energy ~~of rotation mechanical into electric energy;~~ In this embodiment, the secondary dynamo-electric unit E102 is coupled to the centrifugal clutch FC101 and the steering shaft S103 of the engine ICE101

by means of a fixed or variable speed ratio ~~or~~ transmission, variable steering transmission, or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system is subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101, and provides the same functions as those by the preferred embodiment illustrated in Fig. 2 when the output clutch CL301 is closed; and additional functions when the output clutch CL301 is disengaged, including those functions related to subparagraphs (1) through (10) or other specific ~~function~~ functions, and patterns related to those operation patterns described in A1 through A3 or other specific operation ~~pattern~~ patterns.

Fig. 4 shows a fourth preferred embodiment of the present invention having an application system with a centrifugal clutch as the drive control, ~~essentially comprised of having~~ in which the dynamo-electric unit E101 and the load side steering shaft S104 ~~to indicate~~ form a coaxial structure. A structure of the double-acting centrifugal clutches FC101 and FC102 provided between the dynamo-electric unit E101 and the engine ICE101 has its inner layer and outer layer incorporated to the load side steering shaft S104 coupled to the output shaft of the primary dynamo-electric unit E101, and its intermediate layer incorporated to the steering shaft S103 driven by the engine ICE101. The double-acting centrifugal clutches are comprised of two centrifugal FC101 and FC102 combined to form ~~incorporated to each other forming~~ a three-layer structure containing ~~the~~ inner, the intermediate and the outer layers. ~~Within, the~~ The inner layer

and the inner side of the intermediate layer form the centrifugal clutch FC101, the inner layer and the inner side of the intermediate layer are incorporated to the intermediate steering shaft S102 ~~drawn to each other is~~ and provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. ~~The~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. ~~The~~ The intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the engine, ~~having~~ and has its inner side provided with a circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. ~~and the~~ The outer layer is also incorporated to the load side steering shaft S104 so to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The ICE101 is directly ~~or by means of~~ arranged drive through a steering shaft S103, ~~driven~~ by a fixed ~~speed ratio~~ or variable speed ratio transmission, ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T104, and the load side steering shaft S102 is incorporated ~~to~~ with the drive ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further to ~~draw~~ cause the steering shaft S103 to be driven by the engine ICE101 when the load side steering shaft S102 reaches its preset rpm.

~~The~~ The engine ICE101 is comprised of various known internal combustion ~~engine and its related start up and operation speed control device and peripheral interface devices including fuel system, air~~ engines as described above inlet & exhaust system, ~~ignition~~

~~system and cooling system~~ to directly drive the steering shaft S103, or by way of a fixed ~~speed ratio~~ or variable speed ratio transmission ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T104.

~~The~~ fixed or variable speed ratio transmission ~~or~~ variable steering transmission, ~~or~~ planetary transmission mechanism T104 or optional mechanism as described above, ~~an optional mechanism comprised of various known coaxial or non-coaxial transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power locking gear set;~~

~~The~~ primary dynamo-electric unit E101 ~~essentially functioning~~ again functions as a motor and ~~also as a~~ secondary generator as described above, ~~related to a secondary motor of series excitation or pilot~~ compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner rotor or outer rotor rotation dynamo-electric unit; the ~~primary dynamo-electric unit E101~~ and is coupled to the load side steering shaft S104 and to the drive ~~draw~~ side of the centrifugal clutch FC101 by means of a fixed or variable speed ratio transmission, ~~or~~ variable steering transmission, ~~or~~ planetary transmission mechanism T102, ~~and the~~ The load side steering shaft S104 is forthwith outputted to the load, or as required, ~~to execute~~ provide uniaxial output ~~by~~ through a selected fixed ~~speed ratio~~

or variable speed ratio, ~~or~~ variable steering transmission mechanism, or planetary transmission mechanism T103 through the steering shaft S105, or alternatively, through a transmission mechanism comprised of a differential gear set DG to execute differential output through two units of differential steering shafts S105R and S105L.

~~the~~ The secondary dynamo-electric unit E102 essentially ~~functioning~~ functions as a generator and ~~also as a~~ secondary motor, as described above, and ~~comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy, the secondary dynamo-electric unit E102~~ and is coupled to the steering shaft S103 of the engine ICE101and the centrifugal clutch FC101 by means of a fixed or variable speed ratio transmission, ~~or~~ variable steering transmission, or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine. ~~and~~

~~the~~ The output clutch CL101 is an optional mechanism provided between the output side of the primary dynamo-electric unit E101 and the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103, ~~the output clutch CL101~~ and is controlled by manual, mechanical, electromagnetic or hydraulic or centrifugal force.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other

specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3, or other specific operation pattern.

Fig. 5 is a schematic view of the preferred embodiment of the present invention taken from Fig. 4, wherein the primary dynamo-electric unit is replaced with two ~~units of~~ dynamo-electric units respectively provided on the output shaft sides of the differential gear set. The primary dynamo-electric unit E101 in the preferred embodiment illustrated in Fig. 4 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R is directly connected in series with a steering shaft S105R to the right of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the fixed or variable speed ratio ~~or~~ variable steering transmission, or planetary transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or

centrifugal force before being outputted to the steering shaft S105 of the differential gear set DG. Both of the primary dynamo-electric units E101R and ~~another primary dynamo-electric unit~~ E101L are subject to equal speed or differential drive by the drive control device CD101.

Fig. 6 is a view showing that the first preferred embodiment of the present invention as illustrated in Fig. 1 is provided with a controllable clutch. ~~Within, the~~ The centrifugal clutch FC101 and another clutch CL102 controlled by manual, mechanical, electromagnetic, hydraulic power-locking ~~type of~~ or hydraulic coupling ~~type~~ are provided between the engine steering shaft S103 and the load side steering shaft S104 so as to execute power coupling or interruption with respect to ~~on~~ both ~~of~~ the engine steering shaft S103 and the load side steering shaft S104. Because ~~for~~ the system ~~to be~~ is equipped with a power-locking type or hydraulic coupling type controllable clutch CL102 and engine throttle, it ~~to further acquire~~ acquires another specific function for the engine rotation power driven load, in that the ~~The~~ steering shaft S103 may be either directly driven by the engine ICE101, or through ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T104 as described above, which is coupled to the driven ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101. That is, once the load-side steering shaft S104 reaches the preset rpm, the centrifugal clutch FC101 is forthwith closed to cause ~~draw~~ the steering shaft S103 to be driven by the engine ECE101. The centrifugal clutch FC101 and the controllable clutch CL102 are ~~is~~ individually provided or sharing ~~sharing~~ the same structure. ~~The preferred embodiment provided with the controllable clutch is essentially comprised of:~~

In this embodiment, the engine ICE101 ~~comprised of various~~ may again be any of a variety of known internal combustion ~~engine and its~~ various and related devices as described above, ~~start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system~~ to directly drive the steering shaft S103 or by way of ~~fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T104;

~~the fixed or variable speed ratio or variable steering transmission or planetary~~ The transmission mechanism T104 ~~: an optional mechanism~~ may again be comprised of various known coaxial or non-coaxial ~~transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocker gear set or power locking gear set;~~ transmissions as described above.

The primary dynamo-electric unit E101 ~~: essentially functioning~~ again functions as a motor and ~~also as a~~ secondary generator, ~~related to a secondary motor of series excitation or pilot~~ as described above, but in this embodiment compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous ~~inner rotor or outer rotor rotation dynamo-electric unit, the~~ the steering shaft S101 of the primary dynamo-electric unit E101is coupled to the load side steering shaft S104 of the centrifugal clutch FC101 by means of ~~a fixed or variable~~

~~speed ratio or variable steering transmission or planetary~~ transmission mechanism T102~~,~~ and ~~the~~ secondary dynamo-electric unit E102 essentially ~~functioning~~ as a generator and ~~also as a~~ secondary motor, ~~comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy, the secondary dynamo-electric unit E102~~ is coupled to the steering shaft S103 of the engine ICE101 and the centrifugal clutch FC101 by means of ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 7 is a view showing that the preferred embodiment given in Fig. 6 is provided with an output clutch. ~~That is, an output clutch~~ CL101 controlled by manual, mechanical, electromagnetic, and hydraulic or centrifugal force, ~~is provided to the preferred embodiment illustrated in Fig. 6.~~ The output clutch CL101 is provided between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the load. When the

output clutch CL101 is closed, it provides the same function as ~~those by~~ the preferred embodiment illustrated in Fig. 6; and additional functions when the output clutch CL101 is disengaged, including being separated from the load to ~~leave~~ permit the engine to simultaneously drive the first and the second dynamo-electric units E101 and E102 to function as generators, or to drive the primary dynamo-electric E101 alone to operate as a generator while the primary dynamo-electric unit E101 is provided between the output clutch CL101 and the controllable clutch CL102; as well as those functions related to subparagraphs (1) through (10) or other specific function, and patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 8 is a schematic view showing a variation of ~~that~~ the preferred embodiment illustrated in Fig. 7 ~~is further having~~ in which the primary dynamo-electric unit is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of a differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 7 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, a one-way or two-way clutch alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively

adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, connected by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101 to provide the same functions as those ~~by~~ of the preferred embodiment given in Fig. 7.

B. Figs. 9 through 21 show ~~that each of those~~ variations of the preferred embodiments illustrated in Figs. 1 through 8 ~~has those~~ having centrifugal clutches disposed between the steering shaft S103 driven by the engine ICE101 and the load side steering shaft S104 ~~are provided~~ and arranged in opposite ~~direction to become~~ directions to provide additional drive controlled application systems.

Fig. 9 shows a first preferred embodiment of a drive controlled application system ~~by centrifugal clutch of the present invention, essentially comprised of having provided~~ in which the centrifugal clutch FC101 is provided between the steering shaft S103 driven by the engine ICE101 and the load side steering shaft S104 to control the operation of coupling or interruption the transmission by both of the steering shafts S103 and S104.

~~within, the~~ The steering shaft S103 driven by the engine ICE101 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101, and the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 so that once the steering shaft S103 which is directly driven by the engine ICE101 or through a ~~fixed speed ratio or variable speed ratio, or variable steering device or planetary~~ transmission mechanism T104 reaches the preset rpm, it drives to close the centrifugal clutch FC101, ~~thus to draw~~ and couple the load side steering shaft S104. The steering shaft S104 on the load side is provided to drive the load, and a fixed speed ratio or variable speed ratio or variable steering transmission mechanism T102 is provided ~~to~~ on the steering shaft S104 on the load side to engage in mutual transmission with a primary dynamo-electric unit E101.

P The ~~the~~ load side steering shaft S104, ~~is directly outputted to the load, or alternatively, to an output clutch CL101~~ controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being outputted to the load; or as required, to execute single shaft output through a fixed speed ratio or variable speed ratio, variable steering transmission or planetary transmission mechanism T103, then through a steering shaft S105; or an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential ~~steering shafts S105R and S105L;~~

b ~~the~~ engine ICE101, ~~comprised of various known internal combustion engine and its related start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and~~ cooling system to directly drive the steering

shaft S103 or by way of fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary transmission mechanism T104;

the fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T104, an optional mechanism comprised of various known coaxial or non-coaxial transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set;

the primary dynamo-electric unit E101, essentially functioning as a motor and also as a secondary generator, related to a secondary motor of series excitation or pilot compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner rotor or outer rotor rotation dynamo-electric unit; the primary dynamo-electric unit E101is coupled to the load side steering shaft S104 and to the drive draw side of the centrifugal clutch FC101 by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T102; and

and the secondary dynamo-electric unit E102, essentially functioning as a generator and also as a secondary motor, comprised of an inner rotor or outer rotor rotation

function in the same manner as described above in connection

dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy; the secondary dynamo-electric unit E102 is coupled to the steering shaft S103 driven by the engine ICE101and the driven draw side of the centrifugal clutch FC102 by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine;

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, it and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 10 shows a second preferred embodiment of the present invention having an application system with a centrifugal clutch provided in the opposite direction as the drive control, essentially comprised of having connected in series a centrifugal clutch FC101 then another centrifugal clutch FC102 between the steering shaft S103 and the drive load side steering shaft S104 of the engine ICE101. The double acting centrifugal clutches FC101 and FC102 form to each other or are integrated into a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. Within, the inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101,

the inner layer being incorporated to the load side steering shaft S103 of the engine ICE101 ~~drawn to each other is~~ and provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. ~~the~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. ~~the~~ The intermediate layer ~~being~~ is coupled to the load side steering shaft S104 having its inner side provided with a circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. ~~and the~~ The outer layer is also incorporated to the steering shaft S103 on the side of the engine ICE101 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 either is directly driven by the engine or driven through a ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104 ~~by the engine~~, as described above, and is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S104 being coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further ~~to draw~~ cause the steering shaft S103 to be driven by the engine ICE101 when the steering shaft S103 on the side of the engine ICE101 reaches its preset rpm. Alternatively, a ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T102 as described above may be ~~is~~ provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit.

¶ The load side steering shaft S104, engine ICE101, and transmission mechanism T104 correspond to those described above in connection

the load side steering shaft S104: is directly outputted to the load, or alternatively, to an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being outputted to the load; or as required, to execute single shaft output through a fixed speed ratio or variable speed ratio, variable steering transmission or planetary transmission mechanism T103, then through a steering shaft S105; or an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L;

- the engine ICE101: comprised of various known internal combustion engine and its related start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system to directly drive the steering shaft S103 or by way of fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary transmission mechanism T104;
- the fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T104: an optional mechanism comprised of various known coaxial or non-coaxial transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set;

the primary dynamo-electric unit E101: essentially functioning as a motor and also as a secondary generator, related to a secondary motor of series excitation or pilot compound type secondary dynamo-electric unit with

dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner rotor or outer rotor rotation dynamo-electric unit; the primary dynamo-electric unit E101 is coupled to the load side steering shaft S104, the driven draw side of the centrifugal clutch FC101, and the drive draw side of the other centrifugal clutch FC102 by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T102; and also described above.

Similarly, the secondary dynamo-electric unit E102 essentially functioning as a generator and also as a secondary motor, and comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy; the secondary dynamo-electric unit E102 is coupled to the steering shaft S103 driven by the engine ICE101, the drive draw side of the centrifugal clutch FC101, and the driven draw side of the other centrifugal clutch FC102 by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface

M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 11 shows a third preferred embodiment of the present invention having an application system with a centrifugal clutch provided in the opposite direction as the drive control, essentially comprised of having alternatively provided an output clutch CL301 of the type described above ~~controlled by manual, mechanical, electromagnetic or hydraulic force~~ between the steering shaft S103 on the same side of the engine ICE101 ~~from~~ as that of the preferred embodiment illustrated in Fig. 10, and ~~where~~ between the drive ~~draw~~ side of the double-acting centrifugal clutch FC101, and the driven ~~draw~~ side of the other centrifugal clutch FC102. Again, this system is ~~and~~ subject to the control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101 to provide the same functions as those by the preferred embodiment from Fig. 10 when the output clutch CL301 is closed; and when the output clutch CL301 is disengaged, to provide additional functions, those functions related to subparagraphs (1) through (10) or other specific function, and patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 12 shows a fourth of an application system of the present invention having provided a centrifugal clutch in the opposite direction as the drive control, ~~essentially having~~ in which the

dynamo-electric unit E101 and the load side steering shaft S104 ~~to indicate~~ have a coaxial structure while the double-acting centrifugal clutches FC101 and FC102 are provided between the dynamo-electric unit E101 and the engine ICE101. The ~~within its~~ intermediate structure is ~~provided to be incorporated to~~ integral with the load side steering shaft S104 in the same structure of the output shaft of the primary dynamo-electric unit E101, and ~~its~~ the inner and outer layers ~~incorporated to~~ are integral with the engine steering shaft S103. The double acting centrifugal clutches FC101 and FC102 form ~~to each other or integrated into~~ a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. ~~Within,~~ The ~~the~~ inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101. The ~~the~~ inner layer ~~incorporated to~~ is integral with the engine steering shaft S103 ~~drawn to each other~~ and is provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. The ~~the~~ outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The ~~the~~ intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the primary dynamo-electric unit E101 having its inner side provided with circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The drive ~~draw~~ side of the centrifugal clutch FC101 is incorporated ~~to~~ with the steering shaft S103 on the side of the engine ICE101 so to couple to the engine to drive the load when the engine runs at high rpm, and to cut off the linkage to the load when the engine runs at low rpm. The engine

ICE101 is either directly, or by means of the steering shaft S103 driven by ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104, coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 and the driven ~~draw~~ side of the other centrifugal clutch FC102. Meanwhile, the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 and the drive ~~draw~~ side of the other centrifugal clutch FC102 so that when the load side steering shaft S104 reaches its preset rpm, the other centrifugal clutch FC102 is closed ~~thus~~ to ~~draw~~ cause the steering shaft S103 to be driven by the engine ICE101, or when the steering shaft S103 on the side of the engine ICE101 reaches its preset rpm, the centrifugal clutch FC101 is closed, thus ~~to draw~~ causing the load side steering shaft S104 to drive the load.

- ~~the engine ICE101: comprised of various known internal~~ combustion engine and its related start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system to directly drive the steering shaft S103 or by way of fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary transmission mechanism T104;
- the fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T104: an optional mechanism comprised of various known coaxial or non-coaxial transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt ~~gear set or sprocket gear set or power-locking gear set~~. P Engine ICE101 and transmission T104 of this embodiment correspond to those of Fig. 2, while

The primary dynamo-electric unit E101 ~~essentially functioning~~ again functions as a motor and also ~~as~~ a secondary generator as described above. ~~related to a secondary motor of series excitation or pilot~~ compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that ~~the~~ speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner ~~rotor or outer rotor rotation dynamo-electric unit; the~~ The primary dynamo-electric unit E101 is coupled to load side steering shaft S104 of the centrifugal clutch FC101 by means of a ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T102, ~~the~~ The load side steering shaft S104 is forthwith outputted to the load, or alternatively, ~~execute~~ executes uniaxial output through the steering shaft S105 by means of ~~a fixed speed ratio, variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T103, or ~~to execute~~ executes differential output through two units of differential steering shafts S105R and S105L by means of a transmission mechanism comprised of the differential gear set DG.

~~the~~ The secondary dynamo-electric unit E102 ~~essentially functioning~~ again functions as a generator and also ~~as~~ a secondary motor and has the same structure as in the above-embodiments, and ~~comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy; the secondary~~

~~dyname electric unit E102~~ is coupled to the centrifugal clutch FC101 and the steering shaft S103 of the engine ICE101 by means of ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine~~,~~ ~~and the output clutch CL101: an optional mechanism provided~~ between the output side of the primary dynamo-electric unit E101 and the fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T103, the output clutch CL101 is controlled by manual, mechanical, ~~electromagnetic or hydraulic or centrifugal force;~~

P An optional output clutch CL101 may also be included as described above.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 13 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment of the present invention illustrated in Fig. 12 is replaced by two independent dynamo-electric units respectively provided on two output shafts of the differential gear set~~,~~ essentially by ~~having~~ replacing the primary dynamo-electric unit E101 in the preferred embodiment illustrated in Fig. 12 ~~to be substituted by~~ with two independent primary dynamo-electric units E101R and E101L respectively to the right and left. The primary dynamo-electric unit E101R

to the right is directly connected or alternatively, through a one-way or two-way clutch CLU in series to the steering shaft S105R to the right of the differential gear set DG, ~~and the~~ the primary dynamo-electric unit E101L on the left is directly connected or alternatively through a one-way or two-way clutch CLU in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both of the primary dynamo-electric units E101R and another primary dynamo-electric unit E101L are subject to equal speed or differential drive by the drive control device CD101.

Fig. 14 shows that the preferred embodiment given in Fig. 9 is further provided with a ~~controllable clutch by having provided a~~ centrifugal clutch FC101 and a controllable clutch CL102, as described above, ~~controlled by manual, mechanical, electromagnetic, hydraulic power-locking type of or hydraulic coupling type to be provided~~ between the engine steering shaft S103 and the load side steering shaft S104 so to execute power coupling or interruption on both of the engine steering shaft S103 and the load side steering shaft S104, ~~for the system to be equipped with a power-locking type or hydraulic coupling type controllable clutch CL102 and engine throttle, to further acquire another~~ specific function

~~for the engine rotation power driven load.~~ The steering shaft S103 either is directly driven by the engine ICE101, or driven through ~~a fixed or variable speed ratio or variable steering tranemission or planetary~~ transmission mechanism T104, and is coupled to the driven ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101. That is, once the steering shaft S103 on the side of the engine ICE101 reaches its preset rpm, the centrifugal clutch FC101 is forthwith closed to couple ~~draw~~ the load side steering shaft S104. The centrifugal clutch FC101 and the controllable clutch CL102 ~~is~~ are individually provided or ~~sharing~~ share the same structure; and other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 1.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 15 is a view showing that the preferred embodiment given in Fig. 14 is provided with an output clutch. ~~That is, an output clutch~~ CL101 as described above ~~controlled by manual, mechanical, electromagnetic, and hydraulic or centrifugal force is provided to the preferred embodiment illustrated in Fig. 14.~~ The output clutch CL101 is provided between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the

load. When the output clutch CL101 is closed, it provides the same function as ~~those~~ provided by the preferred embodiment illustrated in Fig. 14; and additional functions when the output clutch CL101 is disengaged, including being separated from the load to ~~leave~~ permit the engine to simultaneously drive the first and the second dynamo-electric units E101 and E102 to function as generators, or to drive the primary dynamo-electric E101 alone to operate as a generator while the primary dynamo-electric unit E101 is provided between the output clutch CL101 and the controllable clutch CL102; as well as those functions related to subparagraphs (1) through (10) or other specific function, and patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 16 is a schematic view showing that the preferred embodiment illustrated in Fig. 15 is further modified by having the primary dynamo-electric unit replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of a differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 15 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, a one-way or two-way alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted

with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101 to provide the same functions as those by the preferred embodiment given in Fig. 15.

Fig. 17 shows that the primary dynamo-electric unit and the load side steering shaft illustrated in Fig. 9 share the same structure. ~~Within, the~~ The preferred embodiment illustrated in Fig. 9 is further modified to have the primary dynamo-electric unit E101 and the load side steering shaft S104 ~~to be~~ provided in the same structure, ~~essentially comprised of having provided~~ ~~the~~ The centrifugal clutch FC101 is provided between the steering shaft S103 and the load side steering shaft S104 of the engine ICE101 to control ~~the operation of~~ coupling or interruption of the transmission by both of the steering shafts S103 and S104. ~~Within, the~~ The steering shaft S103 driven by the engine ICE101 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 and the load side steering shaft S104 is coupled to the

driven ~~draw~~ side of the centrifugal clutch FC101 so that once the steering shaft S103, which is directly driven by the engine ICE101 or through ~~a fixed speed ratio or variable speed ratio, or variable steering device or planetary~~ transmission mechanism T104, reaches the preset rpm, it ~~drives to close~~ closes the centrifugal clutch FC101, thus ~~to draw~~ coupling the load side steering shaft S104. The steering shaft S104 on the load side is provided to drive the load, and shares the coaxial structure with the primary dynamo-electric unit E101. The load side steering shaft S104, engine ICE101, and transmission are as described above, while ~~the load side steering shaft S104: is directly outputted~~ to the load, or alternatively, to an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force before being outputted to the load; or as required, to execute single shaft output through a fixed speed ratio or variable speed ratio, variable steering transmission or planetary transmission mechanism T103, then through a steering shaft S105; or an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L;

- the engine ICE101: comprised of various known internal combustion engine and its related start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system to directly drive the steering shaft S103 or by way of fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary transmission mechanism T104;
- the fixed or variable speed ratio or variable steering transmission or planetary ~~transmission mechanism T104: an~~

optional mechanism comprised of various known coaxial or non-coaxial transmission, e.g. a fixed ratio speed or stage or stageless variable transmission mechanism comprised of a gear set, belt gear set or sprocket gear set or power-locking gear set; and

the primary dynamo-electric unit E101: essentially functioning as a motor and also as a secondary generator, related to a secondary motor of series excitation or pilot compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner rotor or outer rotor rotation dynamo-electric unit; the primary dynamo-electric unit E101shares the coaxial structure with the load side steering shaft S104 and is coupled to the driven draw side of the centrifugal clutch FC101.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, it also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 18 shows that the preferred embodiment taken from

Fig. 17 is provided with a secondary dynamo-electric unit directly coupled to the engine steering shaft or engaging in mutual transmission with the engine steering shaft by means of a transmission mechanism. As illustrated in Fig. 17, the preferred embodiment, when required, is provided with the secondary dynamo-electric unit E102 which is directly coupled to the steering shaft S103 of the engine ICE101 or ~~engaging~~ engaged in mutual transmission with the steering shaft S103 of the engine ICE101 by means of a variable steering or planetary transmission mechanism T101 with fixed or variable speed ratio so to function at the same time as a generator and as a motor~~, within,~~. The ~~one~~ secondary dynamo-electric unit E102~~: essentially~~ also functions ~~functioning~~ as a generator and ~~also as a~~ secondary motor, as described above, and ~~comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy; the secondary dynamo-electric unit E102~~ is coupled to the centrifugal clutch FC101 and the steering shaft S103 driven by the engine ICE101 and to the drive ~~draw~~ side of the centrifugal clutch FC101 by means of ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other

specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Figs. 17 and 18 show that the primary dynamo-electric unit E101 is further replaced by two independent units of the primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. ~~Within, the~~ The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG, while the primary dynamo-electric unit E101L on the left is directly connected in series with the steering shaft S105L to the left of the differential gear set DG, or alternatively, adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The load side steering shaft S104 of the centrifugal clutch FC101is directly, or through ~~the fixed ratio or variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T103, outputted to the steering shaft S105 of the differential gear set DG, or alternatively, outputted to the output clutch CL101 before being outputted to the steering shaft S105 of the differential gear set DG. Meanwhile, both of the primary dynamo-electric units E101R and E101L respectively to the right and the left are subject to drive at equal speed or differential drive by the drive control device CD101.

Fig. 19 shows that the preferred embodiment taken from Fig. 17 ~~is~~ further ~~having~~ has its primary dynamo-electric unit ~~to be~~

replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set.

Fig. 20 shows that the preferred embodiment taken from Fig. 18 ~~is~~ further ~~having~~ has its primary dynamo-electric unit ~~to be~~ replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set.

Furthermore, as required, an automatic transmission mechanism T1040 ~~is~~ may be provided between the engine ICE101 and the drive shaft S103 to ~~copy~~ comply with demands on performance or structural space. Fig. 21 shows a preferred embodiment of having an automatic transmission mechanism provided between the engine and the drive shaft of the present invention, ~~essentially comprised of:~~ in which

the automatic transmission mechanism T1040 ~~comprised of~~ includes automatic transmission belt gear set (CTV) or other known automatic transmission device ~~is~~ provided between the engine ICE101 and the steering shaft S103. A centrifugal clutch FC103 is provided between the steering shaft S103 and the load side steering shaft S104 to control the operation of transmission coupling or transmission interruption of both the steering shaft S103 and the load side steering shaft S104. ~~Within, the~~ The steering shaft S103 driven by the engine ICE101 is provided to drive the automatic transmission mechanism T1040 before being coupled to the drive ~~draw~~ side of the centrifugal clutch FC103 by the structure of the output terminal of the automatic transmission mechanism T1040, while the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC103 so that the

centrifugal clutch FC103 is forthwith closed to ~~draw~~ couple the load side steering shaft S104 once the structure of the output terminal of the automatic transmission mechanism reaches its preset rpm.

~~the load side steering shaft S104: configurations~~ PConfigurations of the output structure comprised by the load side steering shaft S104 and the primary dynamo-electric unit E101 include:

1. A directly coaxial structure ~~is indicated~~ provided between the load side steering shaft S104 and the primary dynamo-electric unit E101 ~~for~~ so that the coaxial structure of the load side steering shaft S104 ~~to~~ directly ~~drive~~ drives the load; or

2. Alternatively, a ~~fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T103 ~~is~~ as described above provided between the load side steering shaft S104 and the primary dynamo-electric unit E101 for the output terminal of the primary dynamo-electric unit E101 to directly drive the load; or

3. A ~~fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary or differential~~ transmission mechanism T105 as described above is further provided between the output terminal of the primary dynamo-electric unit E101 and the load as described in subparagraph 1, and then the output terminal is selected as required to drive the load; or (which may also be a differential transmission)

4. ~~a fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary~~ A transmission mechanism T103 is provided between the coaxial structure of the load side steering shaft S104

and the primary dynamo-electric unit E101 and the driven load, ~~then as required the fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary or differential~~ the transmission mechanism T105 is provided as required, and the output terminal is selected as required to drive the load~~; within:~~

~~The~~ The engine ICE101 is as described above. ~~comprised of various known internal combustion engine~~ and its related start-up and operation speed control device and peripheral interface devices including fuel system, air inlet & exhaust system, ignition system and cooling system to directly drive the steering shaft S103 or by way of fixed speed ratio or variable speed ratio or variable steering transmission mechanism or ~~planetary transmission mechanism~~ T104;

~~The~~ The automatic transmission mechanism T1040~~: an optional mechanism~~ may be comprised of various known coaxial or non-coaxial transmission devices, e.g. a gear set, belt gear set, sprocket gear set, power-locking gear set or hydraulic coupling device, ~~or~~ automatic transmission mechanism, or multi stage or stageless variable transmission comprised of a electromagnetic coupling device~~;~~.

~~The~~ The primary dynamo-electric unit E101~~: essentially~~ functioning as a motor and ~~also as a~~ secondary generator, as described above. ~~related to a secondary motor of series excitation~~ or pilot compound type secondary dynamo-electric unit with dynamo-electric unit characteristics that the speed becomes higher when the load gets smaller; or an AC or DC brush or brushless device that executes amperage control (including

control of constant current) for the input electric energy to generate kinetic energy of rotation mechanical that increases torque as the load increases, or to other AC or DC, brush or brushless, synchronous or asynchronous inner rotor or outer rotor rotation dynamo-electric unit; the primary dynamo-electric unit E101 is directly coupled to the driven draw side of the centrifugal clutch FC101, or alternatively, by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T103, coupled to the load side steering shaft S104 driven by the driven draw side of the centrifugal clutch FC101. The primary dynamo-electric unit E101 directly drives the load, or alternatively, a transmission mechanism of fixed speed ratio or variable speed ratio or variable steering, or a fixed speed, variable speed ratio, variable steering, planetary, or differential transmission mechanism T105 is provided to drive the load; and

the secondary dynamo-electric unit E102: essentially functioning as a generator and also as a secondary motor, comprised of an inner rotor or outer rotor rotation dynamo-electric unit generates AC or DC, brush or brushless, synchronous or asynchronous energy to convert kinetic energy of rotation mechanical into electric energy; the secondary dynamo-electric unit E102 is coupled to the centrifugal clutch FC101 and the steering shaft S103 driven by the engine ICE101, and to the drive draw

side of the centrifugal clutch FC101, by means of a fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T101, or the secondary dynamo-electric unit E102 is directly coupled to the steering shaft S103 of the engine.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, it also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

C. Figs. 22 through 29 respectively show an application system having a one-way transmission mechanism SWC101 as a drive control connected in series with the driven ~~draw~~ side of the centrifugal clutch FC101, taken from the preferred embodiment of Figs. 1 through 8.

Fig. 22 is a view showing a first preferred embodiment of the application system taken from Fig. 1 that has a one-way transmission mechanism SWC101 as a drive control connected in series with the driven ~~draw~~ side of the centrifugal clutch FC101, ~~essentially comprised of having provided the~~ the centrifugal clutch FC101 is provided between the steering shaft S103 driven by the engine ICE101 and the load side transmission shaft S104 for controlling the operation of the steering shaft S103 and the load side steering shaft S104 to couple or interrupt transmission, and a one-way transmission mechanism SWC101 is selected for steering operation.

~~Within, the~~ The steering shaft S103 driven by the engine ICE101 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 through the one-way transmission mechanism SWC101 selected for steering operation while the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so that when the load side steering shaft S104 reaches its preset rpm, the centrifugal clutch FC101 is forthwith closed, thus ~~to draw~~ causing the steering shaft S103 to be directly driven by the engine ICE101 or through the ~~fixed speed ratio or variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T104. The load side steering shaft S104 to drive the load is provided with another ~~fixed speed ratio or variable speed ratio or variable steering~~ transmission mechanism or planetary transmission mechanism T102 to engage in mutual transmission with the first primary dynamo-electric unit E101 while other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig 1.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 23 is a view showing a second preferred embodiment of an application system, ~~within,~~ in which a one-way transmission mechanism as the driven control is connected in series with

the driven ~~draw~~ side of the centrifugal clutch of the preferred embodiment taken from Fig. 2. ~~essentiairy comprised of~~ The double-acting centrifugal clutches FC101 and FC102 and the one-way transmission mechanism SWC 101 selected for steering operation are connected in sequence between the steering shaft S103 and the drive load side steering shaft S104 of the engine ICE101. The double-acting centrifugal clutches ~~is~~ are comprised of two units ~~of centrifugal clutches~~ FC101 and FC102 in a three-layer structure, including ~~an~~ inner, ~~an~~ intermediate, and outer ~~an out~~ layers, either by insertion within ~~to~~ each other or by integration ~~integrated~~. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101. The inner layer is integral with ~~incorporated to~~ the load side steering shaft S104 ~~drawn to each other is~~ and provided with a drive power-locking unit to act outwardly ~~outward~~ when the centrifugal force reaches a preset value. The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The intermediate layer related to the one-way transmission mechanism SWC101 selected for steering operation is coupled to the steering shaft S103 driven by the engine. The inner side of the intermediate layer is provided with a circumferential coupling surface for power-locking and its outer side is provided with a drive power-locking unit acting outwardly ~~outward~~ when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The outer layer is also integral with ~~incorporated to~~ the load side steering shaft S104 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 is either directly driven or driven by the engine through a ~~fixed speed ratio or variable speed~~

~~ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104, ~~by the engine~~ as described above, and is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S104 being coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further ~~to draw~~ cause the steering shaft S103 to be driven by the engine ICE101 when the load side steering shaft S104 reaches its preset rpm. Alternatively, a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary transmission mechanism T102 is provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit while other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 2.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 24 is a view showing a third preferred embodiment of an application system that has a one-way transmission mechanism as the driven control connected in series with the driven ~~draw~~ side of the centrifugal clutch of the preferred embodiment taken from Fig. 3. ~~Within, the fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ The transmission mechanism T102, the inner

circumference of the coupling surface for power-locking of the double-acting centrifugal clutch FC101, and the outer circumference of the coupling surface for power-locking of the double-acting centrifugal clutch FC102 are jointly incorporated ~~to~~ with an intermediate steering shaft S102. The double-acting centrifugal clutches are comprised of two units of centrifugal clutches FC101 and FC102 inserted ~~to~~ within each other in a three-layer structure, ~~an~~ having inner, ~~an~~ intermediate, and ~~an~~ ~~out~~ outer layers. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101. The inner layer is incorporated ~~to~~ with the intermediate steering shaft S102 ~~drawn to each other is~~ and provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The intermediate layer related to the one-way transmission mechanism SWC101 selected for steering operation is coupled to the steering shaft S103 driven by the engine. The inner side of the intermediate layer is provided with a circumferential coupling surface for power-locking and its outer side is provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The outer layer is also incorporated ~~to~~ with the intermediate steering shaft S104 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 either directly driven or driven by the engine through ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~

transmission mechanism T104 ~~by the engine~~ and is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the intermediate steering shaft S102 being coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further to draw the steering shaft S103 driven by the engine ICE101 when the intermediate steering shaft S102 reaches its preset rpm.

~~The~~ The intermediate steering shaft S102, is directly outputted to the load, or alternatively, to an output clutch CL301 as described above, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the load via the load side steering shaft S104; or as required, to execute single shaft output through a ~~fixed speed ratio or variable speed ratio, variable steering transmission or planetary~~ transmission mechanism T103, then through a steering shaft S105; or through an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L. ~~the~~ The additional output clutch CL301is provided between the intermediate steering shaft S102 and the load side steering shaft S104 with both steering shafts driven by the power-locking coupling surfaces on the inner and outer circumferences of the double-acting centrifugal clutches FC101 and FC102 while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 3.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific

system structure described above provides the same functions ~~same~~ as ~~those in~~ the preferred embodiment illustrated in Fig. 23 when the output clutch CL301 is closed; and provides additional ~~function~~ functions when the output clutch CL301 is disengaged, including functions related to those described in subparagraphs (1) through (10) or other specific function, and operation patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 25 is a view showing a fourth preferred embodiment of an application system that has a one-way transmission mechanism as the driven control connected in series with the driven draw side of the centrifugal clutch of the preferred embodiment taken from Fig. 4. ~~Within, the~~ The primary dynamo-electric unit E101 and the load side steering shaft S104 ~~indicate~~ form a coaxial structure, and ~~where~~ between the dynamo-electric unit E101 and the engine ICE101 are provided ~~with the~~ double-acting centrifugal clutches FC101 and FC102, and the one-way transmission mechanism SWC101 selected for steering operation. Both ~~of~~ the inner and the outer structures of the double-acting centrifugal clutches FC101 and FC102 are incorporated ~~to~~ with the load side steering shaft S104 coupled to the output shaft of the primary dynamo-electric unit E101, and ~~its~~ the intermediate layer structure is mutually incorporated ~~to~~ into the steering shaft S103 driven by the engine ICE101. The double-acting centrifugal clutches ~~is~~ are again comprised of two units of centrifugal clutches FC101 and FC102 inserted ~~to~~ with each other in a three-layer structure, including ~~an~~ inner, ~~an~~ intermediate, and ~~an~~ ~~out~~ outer layers. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101. The inner layer incorporated to the load side steering shaft S104

~~drawn to each other~~ is provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The intermediate layer related to the one-way transmission mechanism SWC101 selected for steering operation is coupled to the steering shaft S103 driven by the engine. The inner side of the intermediate layer is provided with a circumferential coupling surface for power-locking and its outer side is provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The outer layer is also incorporated ~~to~~ with the load side steering shaft S103 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 is either directly driven by the engine or driven through ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104 ~~by the engine~~ and is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S103 being coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further ~~to draw~~ cause the steering shaft S103 to be driven by the engine ICE101 when the load side steering shaft S102 reaches its preset rpm. The output clutch CL101 when required is provided between the output side of the primary dynamo-electric unit E101 and the ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T103. The output clutch CL101 is controlled by manual,

mechanical, electromagnetic, hydraulic or centrifugal force while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 4.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 26 is a schematic view ~~showing~~ in which the primary dynamo-electric unit in the preferred embodiment illustrated in Fig. 25 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of a differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 25 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, a one-way or two-way alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way

or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101.

Fig. 27 is a view showing that the preferred embodiment of the present invention illustrated in Fig. 22 is provided with a controllable clutch. ~~Within, the~~ The centrifugal clutch FC101 and a controllable clutch CL102 ~~controlled by manual, mechanical, electromagnetic, hydraulic~~ power-locking type of or hydraulic ~~coupling type~~ are provided between the engine steering shaft S103 and the load side steering shaft S104 so to execute power coupling or interruption on both ~~of~~ the engine steering shaft S103 and the load side steering shaft S104 ~~for the system to be equipped with a power-locking type or hydraulic coupling type controllable clutch CL102 and engine throttle,~~ to further acquire another specific function for the engine rotation power driven load. The steering shaft S103 is either directly driven by the engine ICE101, or through a ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission

mechanism T104, and is coupled to the driven ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the drive draw side of the centrifugal clutch FC101. That is, once the load-side steering shaft S104 reaches the preset rpm, the centrifugal clutch FC101 is forthwith closed to draw the steering shaft S103 driven by the engine ECE101. The centrifugal clutch FC101 and the controllable clutch CL102 ~~is~~ are individually provided or ~~sharing~~ share the same structure.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 28 shows the preferred embodiment illustrated in Fig. 27 is provided with an output clutch. ~~Within the~~ The preferred embodiment illustrated in Fig. 27 is provided with an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force. The output clutch CL101 is provided between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the load. When the output clutch CL101 is closed, it provides the same function as ~~those by~~ in the preferred embodiment illustrated in Fig. 27, and additional functions when the output clutch CL101 is disengaged, including being separated from the load to ~~leave~~ permit the engine to simultaneously drive the first and the second dynamo-electric units E101 and E102 to function as generators,

or to drive the primary dynamo-electric E101 alone to operate as a generator, as well as those functions related to subparagraphs (1) through (10) or other specific function, and patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 29 is a schematic view showing that the preferred embodiment given in Fig. 28 ~~has~~ in which the primary dynamo-electric unit ~~to be~~ is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 28 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, a one-way or two-way clutch is alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG, or alternatively adapted with a one-way or two-way clutch CLU, before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103, before being outputted to the steering shaft S105 of the differential gear set DG, or

alternatively, by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101to provide the same functions as those by the preferred embodiment given in Fig. 28.

D. In Figs. 30 through 37, ~~those~~ the centrifugal clutches disposed between the steering shafts S103 driven by the engine ICE101 and the load side steering shaft S104 of the preferred embodiments given in Figs. 9 through 16 are provided in ~~opposite direction~~ opposition to function as ~~the~~ drive application systems.

Fig. 30 shows ~~that~~ a first preferred embodiment of a drive application system of the present invention, in which ~~is comprised of having~~ the centrifugal ~~clutch~~ clutches from the preferred embodiment of Fig. 22 ~~to be~~ are provided in opposite ~~direction~~ directions and a one-way transmission mechanism is selected for steering operation. ~~Wherein, the~~ The centrifugal clutch FC101 is provided between the steering shaft S103 driven by the engine ICE101 and the load side steering shaft S104 to control the operation of coupling or interruption the transmission by both ~~of~~ the steering shafts S103 and S104. The steering shaft S103 driven by the engine ICE101 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101, and the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, so that once the steering shaft S103 which is directly driven by the engine ICE101 or through a ~~fixed speed ratio or variable speed~~

~~ratio, or variable steering device or planetary~~ transmission mechanism T104 reaches the preset rpm, it drives to close the centrifugal clutch FC101, thus ~~to draw~~ coupling the load side steering shaft S104. The steering shaft S104 on the load side is provided to drive the load, and a fixed speed ratio or variable speed ratio or variable steering transmission mechanism T102 is provided ~~to~~ on the steering shaft S104 on the load side to engage in mutual transmission with a primary dynamo-electric unit E101 while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 9.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 31 shows that a second preferred embodiment of a drive application system the present invention is comprised of having the centrifugal clutch from the preferred embodiment of Fig. 23 ~~to~~ be provided in opposite ~~direction~~ directions and a one-way transmission mechanism selected for steering operation. ~~Wherein, the~~ The double-acting centrifugal clutches FC101 and FC102 are connected in series between the steering shaft S103 and the drive load side steering shaft S104 of the engine ICE101. The double acting centrifugal clutches FC101 and FC102 form ~~to each other by insertion or are integrated into~~ a 3-layer

structure containing an inner layer, an intermediate layer and an outer layer. The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101. ~~the~~ The inner layer is incorporated ~~to~~ with the steering shaft S103 on the side of the engine ICE101 ~~drawn to each other~~ and is provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. ~~the~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. ~~the~~ The intermediate layer ~~being~~ is coupled to the load side steering shaft S103 ~~having~~ and has its inner side provided with a circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. ~~and the~~ The outer layer is also incorporated ~~to~~ with the steering shaft S103 on the side of the engine ICE101 so to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The load side steering shaft S103 is either directly driven by the engine or driven through a ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104, ~~by the engine~~ and is coupled through the one-way transmission mechanism SWC101 selected for steering operation to the drive ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S104 being coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 so to forthwith close the centrifugal clutch FC101 and further to draw the load side steering shaft S104 when the load side steering shaft S104 reaches its preset rpm. Alternatively, ~~a fixed speed ratio or variable speed ratio, or variable steering transmission~~

~~mechanism or planetary~~ transmission mechanism T102 is provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit, while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 10.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 32 shows ~~that~~ a third preferred embodiment of a drive application system of the present invention, ~~is comprised of having~~ in which the centrifugal clutch from the preferred embodiment of Fig. 24 ~~to be~~ is provided in opposite ~~direction~~ directions and a one-way transmission mechanism selected for steering operation. ~~Wherein, an~~ The output clutch CL301 controlled by manual, mechanical, electromagnetic or hydraulic force is alternatively provided between the steering shaft S103 on the side of the engine ICE101 and the double-acting centrifugal clutches, ~~at where~~ between the drive ~~draw~~ side of the centrifugal clutch FC101 and the driven ~~draw~~ side of the centrifugal clutch FC102, while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 11.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device

CD101 and the storage discharging device ESD101. The specific system structure described above provides same functions ~~same as those by~~ the preferred embodiment illustrated in Fig. 31 when the output clutch CL301 is closed; and when the output clutch CL301 is disengaged, the specific system structure described above provides additional functions related to those described in subparagraphs (1) through (10) or other specific ~~function~~, ~~it~~ also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 33 shows that a fourth preferred embodiment of a drive application system the present invention is comprised of having the centrifugal clutch from the preferred embodiment of Fig. 25 ~~to~~ be provided in opposite ~~direction~~ and a one-way transmission mechanism selected for steering operation. ~~Wherein, the~~ dynamo-electric unit E101 and the load side steering shaft S104 ~~indicate~~ a coaxial structure with the double-acting centrifugal clutches FC101 and FC102 provided between the dynamo-electric unit E101 and the engine ICE101. The intermediate structure is ~~provided to be~~ incorporated ~~to~~ the load side steering shaft S104 in the same structure of the output shaft of the primary dynamo-electric unit E101, and its inner and outer layers incorporated ~~to~~ the engine steering shaft S103. The double acting centrifugal clutches FC101 and FC102 form ~~to each other or integrated into~~ a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. ~~Within, the~~ inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101, ~~the~~ inner layer incorporated to the engine steering shaft S103 ~~drawn to each other~~ is provided with a drive power-locking unit to act

~~outward~~ outwardly when the centrifugal force reaches a preset value; the outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. ~~the~~ The intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the primary dynamo-electric unit E101 having its inner side provided with circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The drive ~~draw~~ side of the centrifugal clutch FC101 is incorporated ~~to~~ with the steering shaft S103 on the side of the engine ICE101 so to couple to the engine to drive the load when the engine runs at high rpm, and to cut off the linkage to the load when the engine runs at low rpm. The engine ICE101 is either directly or by means of the steering shaft S103 driven by ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104, and is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 and the driven ~~draw~~ side of the other centrifugal clutch FC102. Meanwhile, the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 and the drive ~~draw~~ side of the other centrifugal clutch FC102 so that when the load side steering shaft S104 reaches its preset rpm, the other centrifugal clutch FC102 is closed thus to draw the steering shaft S103 driven by the engine ICE101, or when the steering shaft S103 on the side of the engine ICE101 reaches its preset rpm, the centrifugal clutch FC101 is closed, ~~thus to draw~~ thereby causing the load side steering shaft S104 to drive the load. ~~As~~ As required, the output clutch

CL101 is provided ~~at where~~ between the output side of the primary dynamo-electric unit E101 and the ~~fixed speed, or variable speed ratio or variable steering transmission mechanism or planetary~~ transmission mechanism T103. The output clutch CL101 is controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 12.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 34 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 33 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 33 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, ~~a one-way or two-way alternatively~~ adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R

to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through ~~the fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101.

Fig. 35 shows that the preferred embodiment of Fig. 30 is provided with ~~a controllable clutch. Wherein, a centrifugal~~ the centrifugal clutch FC101 and another clutch CL102 ~~controlled by manual, mechanical, electromagnetic, hydraulic power locking type of or hydraulic coupling type are provided~~ of the type described above between the engine steering shaft S103 and the load side steering shaft S104 so to execute power coupling or interruption on both of the engine steering shaft S103 and the load side steering shaft S104. ~~for the system to be equipped with a power-locking type or hydraulic coupling type controllable clutch CL102 and engine~~ throttle, to further ~~acquire another specific~~ function

~~for the engine rotation power driven load.~~ The steering shaft S103 is either directly driven by the engine ICE101, or through ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T104, and is coupled to the drive ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101. That is, once the steering shaft S103 on the side of the engine ICE101 reaches the preset rpm, the centrifugal clutch FC101 is forthwith closed to couple the load side steering shaft S104. The centrifugal clutch FC101 and the controllable clutch CL102 ~~is~~ are individually provided or ~~sharing~~ share the same structure, while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 30.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 36 shows that the preferred embodiment of Fig. 35 is provided with an ~~output clutch. Wherein, the preferred embodiment taken from Fig. 35 being further provided with an~~ output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force is~~ disposed ~~at where~~ between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the load. When the output shaft

CL101 is closed, it provides the same functions as those by the preferred embodiment given in Fig. 35; and when it is disengaged, the engine ICE101 simultaneously drives the primary dynamo-electric unit E101 and the secondary dynamo-electric unit E102 to operate as a generator, or the primary dynamo-electric unit E101 is driven alone to operate as a generator and also ~~provides~~ provide additional functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 37 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 36 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 36 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, ~~a one-way or two-way alternatively~~ adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The

steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101, while providing the same functions as those provided in the preferred embodiment illustrated in Fig. 36.

E. ~~Fig.~~ Figs. 38 through 45 show ~~that~~ preferred embodiments of the application system that are provided in each preferred embodiment with a one-way transmission mechanism SWC101 between the steering shaft S103 ~~incorporated~~ connected to the engine ICE101 and the driven ~~draw~~ side of the centrifugal clutch FC101, and ~~the~~ an output shaft S104 ~~incorporated~~ connected to the drive ~~draw~~ side of the centrifugal clutch FC101.

Fig, 38 shows a first preferred embodiment of an application system taken from the preferred embodiment illustrated in Fig. 1, which is changed ~~to~~ in that a one-way transmission mechanism is provided between the steering shaft of the engine ~~incorporated to~~ on the driven ~~draw~~ side of the centrifugal clutch and the output shaft incorporated ~~to~~ with the drive ~~draw~~ side of the centrifugal clutch. ~~Wherein, the~~ The centrifugal clutch FC101 and the one-way transmission mechanism SWC101 are selected for

steering operation to control the operation of both steering shafts S103 and S104 to couple or interrupt transmission, and are ~~is~~ provided between the steering shaft S103 driven by the engine ICE101 and the load side steering shaft S104. The steering shaft S103 driven by the engine ICE101 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so that when the load side steering shaft S104 reaches its preset rpm, the centrifugal clutch FC101 is forthwith closed, thus to ~~draw~~ cause the steering shaft S103 to either be directly driven by the engine ICE101 or driven via the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T104. ~~the~~ The load side steering shaft S104 is provided to drive the load and ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T102 described above may be provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit E101 while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 1.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 39 shows a second preferred embodiment of an

directly driven or driven through ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104 ~~by the engine~~ is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S104, ~~to~~ the drive ~~draw~~ side of the centrifugal clutch FC101 so to forthwith close the centrifugal clutch FC101 and further to ~~draw~~ the steering shaft S103 driven by the engine ICE101 when the load side steering shaft S104 reaches its preset rpm. Alternatively, ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T102 ~~is~~ provided on the load side steering shaft S104 to engage mutual transmission with the primary dynamo-electric unit while the other units comprising the system are the same as those disclosed in the preferred embodiment illustrated in Fig. 2;

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 40 shows a third preferred embodiment of an application system taken from the preferred embodiment illustrated in Fig. 3, ~~Wherein~~ a one-way transmission mechanism is provided between the steering shaft of the engine incorporated ~~to~~ the driven ~~draw~~ side of the centrifugal clutch and the output shaft incorporated ~~to~~ the drive ~~draw~~ side of the centrifugal clutch.

application system taken from the preferred embodiment illustrated in Fig. 2. ~~Wherein a~~ A one-way transmission mechanism is provided between the steering shaft of the engine ~~incorporated to~~ on the driven ~~draw~~ side of the centrifugal clutch and the output shaft ~~incorporated to~~ on the drive draw side of the centrifugal clutch. The double-acting centrifugal clutches FC101 and FC102 are connected in series and in sequence between the steering shaft S103 and the load side steering shaft S104 of the engine ICE101, and on the one-way transmission mechanism SWC101 selected for steering operation. The double acting centrifugal clutches FC101 and FC102 form ~~to each other or integrated into~~ a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. ~~Within, the~~ The inner layer and the inner side of the intermediate layer form the centrifugal clutch FC101, ~~the~~ The inner layer incorporated to the load side steering shaft S104 ~~drawn to each other~~ and is provided with a drive power-locking unit to act ~~outward~~ outwardly when the centrifugal force reaches a preset value. ~~the~~ The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102, ~~the~~ The intermediate layer ~~being~~ is coupled to the steering shaft S103 driven by the engine having its inner side provided with a circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value ~~performs the functions~~ to function as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer, ~~and the~~ The outer layer is also incorporated to the load side steering shaft S104 so as to provide linkage with the load when the engine runs at low rpm or is temporarily cut off. The steering shaft S103 is either

The ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T102 taken from the preferred embodiment illustrated in Fig. 39 ~~are~~ is jointly incorporated ~~to~~ with the intermediate steering shaft S102 ~~with~~ into the coupling surface of the inner circumference of the double-acting centrifugal clutch FC101 for power locking, and the coupling surface of the outer circumference of the double-acting centrifugal clutch FC102. The double-acting centrifugal clutches are comprised of two units of centrifugal clutches FC101 and FC102 inserted ~~to~~ within each other in a three-layer structure, including ~~an~~ inner, ~~an~~ intermediate, and an ~~out~~ outer layers, as described above. ~~Within, the inner layer and the inner side of the intermediate layer~~ form the centrifugal clutch FC101. The inner layer incorporated to the intermediate steering shaft S102 drawn to each other is provided with a drive power-locking unit to act outward when the centrifugal force reaches a preset value. The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The intermediate layer related to the one-way transmission mechanism SWC101 selected for steering operation is coupled to the steering shaft S103 driven by the engine. The inner side of the intermediate layer is provided with a circumferential coupling surface for power-locking and its outer side is provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value performs the functions as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The outer layer is also incorporated to the intermediate steering shaft S104 so to provide linkage ~~with the load when the~~ engine runs at low rpm or is ~~temporarily~~

~~cut off~~. The steering shaft S103 is either directly driven or driven through ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ and transmission mechanism T104 by the engine is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the one-way transmission mechanism SWC101 selected for steering operation ~~is~~ being provided between the steering shaft S103 and the intermediate shaft S102 while the intermediate shaft S102 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 so as to forthwith close the centrifugal clutch FC101 and further to draw the steering shaft S103 driven by the engine ICE101 when the intermediate steering shaft S102 reaches its preset rpm. ~~The~~ The intermediate steering shaft S102 is directly outputted to the load, or alternatively, to an output clutch CL301 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the load via the load side steering shaft S104, or as required, to execute single shaft output through ~~a fixed speed ratio or variable speed ratio, variable steering transmission or planetary~~ transmission mechanism T103, then through a steering shaft S105; or through an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L. ~~The~~ The additional output clutch CL301 is provided between the intermediate steering shaft S102 and the load side steering shaft S104 with both steering shafts driven by the power-locking coupling surfaces on the inner and outer circumferences of the double-acting centrifugal clutches FC101 and FC102 while the other units comprising the system are the same as those disclosed in the preferred

embodiment illustrated in Fig. 3.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides same functions same as those by the preferred embodiment illustrated in Fig. 39 when the output clutch CL301 is closed; and when the output clutch CL301 is disengaged, the specific system structure described above provides additional functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 41 shows a fourth preferred embodiment of an application system taken from the preferred embodiment illustrated in Fig. 4. ~~Wherein a~~ A one-way transmission mechanism is provided between the steering shaft of the engine incorporated ~~to~~ with the driven ~~draw~~ side of the centrifugal clutch and the output shaft incorporated ~~to~~ with the drive ~~draw~~ side of the centrifugal clutch. The primary dynamo-electric unit E101 and the load side steering shaft S104 ~~indicate~~ form a coaxial structure and the double-acting centrifugal clutches FC101 and FC102 are provided between the dynamo-electric unit E101 and the engine ICE101 with its inner and outer structures ~~to be~~ incorporated ~~to~~ with the load side steering shaft S104, which in turn is incorporated ~~to~~ with the output terminal of the primary dynamo-electric unit E101, ~~and~~ its intermediate structure ~~is~~ being incorporated ~~to~~ with the steering shaft S103 driven by the engine ICE101. The double-acting centrifugal clutches ~~is~~ are comprised of two units of centrifugal

clutches FC101 and FC102 inserted ~~to~~ into each other in a three-layer structure, ~~an~~ including inner, ~~an~~ intermediate, and ~~an out~~ outer layers. ~~Within~~, again as described above, ~~the inner layer and the inner side of the intermediate layer~~ form the centrifugal clutch FC101. The inner layer incorporated to the load side steering shaft S104 drawn to each other is provided with a drive power-locking unit to act outward when the centrifugal force reaches a preset value. The outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102. The intermediate layer related to the one-way transmission mechanism SWC101 selected for steering operation is coupled to the steering shaft S103 driven by the engine. The inner side of the intermediate layer is provided with a circumferential coupling surface for power-locking and its outer side is provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value performs the functions as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The outer layer is also incorporated to the load side steering shaft S104 so to provide linkage with the load when the engine runs at high speed and to cut off the linkage to the load when the engine runs at low speed. The steering shaft S103 either directly driven or driven through a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary transmission mechanism T104 by the engine is coupled to the driven draw side of the centrifugal clutch FC101 and the load side steering shaft S103 ~~to the driven draw side of the centrifugal clutch FC101~~. The one-way transmission mechanism SWC101 selected for steering operation is provided between the steering shaft S103 and the load side steering shaft S104, and the load side steering shaft

S104 is incorporated ~~to~~ with the drive ~~draw~~ side of the centrifugal clutch FC101 so that once the load side steering shaft S104 reaches its rpm, the centrifugal clutch FC101 is closed ~~thus~~ to ~~draw~~ couple the steering shaft S103 driven by the engine ICE101. The output clutch CL101 when required is provided between the output side of the primary dynamo-electric unit E101 and the ~~fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T103. The output clutch CL101 is controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 4.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 42 is a schematic view showing ~~that~~ a modification of the preferred embodiment illustrated in Fig. 41 ~~is further having~~ in which the primary dynamo-electric unit is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of a differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 41 ~~is~~ are replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the

left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or ~~alternatively, a one-way or two-way~~ alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the fixed or variable speed ratio or variable steering transmission or planetary transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydrauiric or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101.

Fig. 43 is a view showing that the preferred embodiment taken from Fig. 38 of the present invention is provided with a controllable clutch. ~~Within, the~~ The centrifugal clutch FC101 and another clutch CL102 described above ~~controlled by manual, mechanical, electromagnetic, hydraulic power-locking type of or hydraulic~~

~~coupling type~~ are provided between the engine steering shaft S103 and the load side steering shaft S104 so to execute power coupling or interruption on both of the engine steering shaft S103 and the load side steering shaft S104 ~~for the system to be equipped with a power-locking type or hydraulic coupling type controllable clutch CL102 and engine throttle,~~ to further acquire another specific function for the engine rotation power driven load. The steering shaft S103 is either directly driven by the engine ICE101, or driven through ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T104, and is coupled to the driven ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101. That is, once the load-side steering shaft S104 reaches the preset rpm, the centrifugal clutch FC101 is forthwith closed to cause the steering shaft S103 to be driven by the engine ICE101. The centrifugal clutch FC101 and the controllable clutch CL102 ~~is~~ are individually provided or ~~sharing~~ share the same structure;

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 44 is a view showing that the preferred embodiment given in Fig. 43 is provided with ~~an output clutch. Wherein,~~ an output clutch CL101 as described above. ~~controlled by manual, mechanical,~~

~~electromagnetic, and hydraulic or centrifugal force is provided to the preferred embodiment illustrated in Fig. 43.~~ The output clutch CL101 is provided between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the load. When the output clutch CL101 is closed, it provides the same function as ~~those by~~ the preferred embodiment illustrated in Fig. 43; and additional functions when the output clutch CL101 is disengaged, including being separated from the load to ~~leave~~ permit the engine to simultaneously drive the first and the second dynamo-electric units E101 and E102 to function as generators, or to drive the primary dynamo-electric E101 alone to operate as a generator while the primary dynamo-electric unit E101 is provided between the output clutch CL101 and the controllable clutch CL102; as well as those functions related to subparagraphs (1) through (10) or other specific function, and patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 45 is a schematic view showing a further modification of ~~that~~ the preferred embodiment illustrated in Fig. 44 ~~is further having~~ in which the primary dynamo-electric unit is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of a differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 44 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or ~~alternatively, a one-way or two-way~~ alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the

steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101 for providing functions same as those described for the preferred embodiment illustrated in Fig. 44.

F. As illustrated in Figs. 46 through 53, ~~those~~ the preferred embodiments taken from Figs. 38 through 45 ~~have~~ are further ~~to provide~~ provided with various centrifugal clutches and ~~the~~ a one-way transmission mechanism SWC101 between the steering shaft S103 and the load side steering shaft S104 driven by the engine ICE101 in an opposition direction to function as the drive application system.

Fig. 46 shows ~~that~~ a first preferred embodiment of a drive application system of the present invention in which ~~is comprised of having~~

the centrifugal clutch from the preferred embodiment of Fig. 38 ~~to be~~ is provided in opposite ~~direction~~ directions and a one-way transmission mechanism is selected for steering operation. ~~Wherein, the~~ The centrifugal clutch FC101 is provided between the steering shaft S103 driven by the engine ICE101 and the load side steering shaft S104 to control the operation of coupling or interruption the transmission by both of the steering shafts S103 and S104. The steering shaft S103 driven by the engine ICE101 is coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 and the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101. The one-way transmission mechanism SWC 101 is provided between the drive steering shaft S103 and the load side steering shaft S104 driven by the engine ICE101 so that once the steering shaft S103, which is directly driven by the engine ICE101 or through ~~a fixed speed ratio or variable speed ratio, or variable steering device or planetary~~ transmission mechanism T104, reaches the preset rpm, it drives to close the centrifugal clutch FC101, thus to ~~draw~~ couple the load side steering shaft S104. The steering shaft S104 on the load side is provided to drive the load, and ~~a fixed speed ratio or variable speed ratio or variable steering~~ transmission mechanism T102 is provided ~~to~~ on the steering shaft S104 on the load side to engage in mutual transmission with a primary dynamo-electric unit E101 while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 38.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific

system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 47 shows that a second preferred embodiment of a drive application system the present invention is comprised of having the centrifugal clutch from the preferred embodiment of Fig. 39 ~~to be~~ provided in opposite ~~direction~~ directions and a one-way transmission mechanism selected for steering operation. ~~Wherein, the~~ The double-acting centrifugal clutches FC101 and FC102 are connected in series between the steering shaft S103 and the drive load side steering shaft S104 of the engine ICE101. The double-acting centrifugal clutches FC101 and FC102 form ~~to each other by insertion or are integrated into~~ a 3-layer structure containing an inner layer, an intermediate layer and an outer layer as described above. ~~The inner layer and the inner side of the intermediate layer~~ form the centrifugal clutch ~~FC101, the inner layer incorporated to the steering shaft S103 on the side of~~ the engine ICE101 drawn to each other is provided with a drive power-locking unit to act outward when the centrifugal force reaches a preset value; the outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102; the intermediate layer being coupled to the load side steering shaft S104 having its inner side provided with circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value performs the functions as an output clutch with ~~the power-locking circumferential coupling surface on the inner~~

~~side of the outer layer; and the outer layer is also incorporated to the steering shaft S103 on the side of the engine ICE101, so to provide linkage with the load when the engine runs at low rpm or is temporarily cut off.~~ The load side steering shaft S103, either directly driven by the engine or driven through ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104 by the engine, and is coupled through the one-way transmission mechanism SWC101 selected for steering operation to the drive ~~draw~~ side of the centrifugal clutch FC101, ~~and~~ the load side steering shaft S104 being coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 so to forthwith close the centrifugal clutch FC101 and further to draw the load side steering shaft S104 when the load side steering shaft S104 reaches its preset rpm. Alternatively, ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T102 is provided on the load side steering shaft S104 to engage in mutual transmission with the primary dynamo-electric unit E101; while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 39~~1~~.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 48 shows that a third preferred embodiment of a drive

application system the present invention is comprised of having the centrifugal clutch from the preferred embodiment of Fig. 40 ~~to be~~ provided in an opposite direction and a one-way transmission mechanism selected for steering operation. ~~Wherein, an~~ The output clutch CL301 controlled by manual, mechanical, electromagnetic or hydraulic force is alternatively provided between the steering shaft S103 on the side of the engine ICE101 and the double-acting centrifugal clutches ~~at where~~ between the drive ~~draw~~ side of the centrifugal clutch FC101 and the driven ~~draw~~ side of the centrifugal clutch FC102, while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 40.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides same functions same as those by the preferred embodiment illustrated in Fig. 47 when the output clutch CL301 is closed; and when the output clutch CL301 is disengaged, the specific system structure described above provides additional functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 49 shows that a fourth preferred embodiment of a drive application system the present invention is comprised of having the centrifugal clutch from the preferred embodiment of Fig. 41 ~~to be~~ provided in an opposite direction and a one-way transmission mechanism selected for steering operation.

~~Wherein, the~~ The dynamo-electric unit E101 and the load side steering shaft S104 ~~indicate~~ form a coaxial structure with the double-acting centrifugal clutches FC101 and FC102 provided between the dynamo-electric unit E101 and the engine ICE101. The intermediate structure is ~~provided to be~~ incorporated ~~to~~ with the load side steering shaft S104 in the same structure of the output shaft of the primary dynamo-electric unit E101, and its inner and outer layers are incorporated ~~to~~ with the engine steering shaft S103. The double acting centrifugal clutches FC101 and FC102 form ~~to each other or integrated into~~ a 3-layer structure containing an inner layer, an intermediate layer and an outer layer. ~~Within, the inner layer and the inner side of the~~ as described above ~~intermediate~~ layer form the centrifugal clutch FC101, the inner layer incorporated to the engine steering shaft S103 drawn to each other is provided with a drive power-locking unit to act outward when the centrifugal force reaches a preset value; the outer side of the intermediate layer and the inner side of the outer layer form the centrifugal clutch FC102; the intermediate layer being coupled to the steering shaft S103 driven by the primary dynamo-electric unit E101 having its inner side provided with circumferential coupling surface for power-locking and its outer side provided with a drive power-locking unit acting outward when the centrifugal force reaches its preset value performs the functions as an output clutch with the power-locking circumferential coupling surface on the inner side of the outer layer. The drive draw side of the centrifugal clutch FC101 is incorporated to the steering shaft S103 on the side of the engine ICE101 so to couple to the engine to drive the load when the engine runs at high rpm, and to ~~cut off the linkage to the load when the engine runs at low rpm~~. The engine

ICE101 is either directly or by means of the steering shaft S103 driven by ~~a fixed speed ratio or variable speed ratio, or variable steering transmission mechanism or planetary~~ transmission mechanism T104, and coupled to the drive ~~draw~~ side of the centrifugal clutch FC101 and the driven ~~draw~~ side of the other centrifugal clutch FC102. Meanwhile, the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101 and the drive ~~draw~~ side of the other centrifugal clutch FC102 so that when the load side steering shaft S104 reaches its preset rpm, the other centrifugal clutch FC102 is closed ~~thus~~ to ~~draw~~ cause the steering shaft S103 to be driven by the engine ICE101. ~~or when~~ When the steering shaft S103 on the side of the engine ICE101 reaches its preset rpm, the centrifugal clutch FC101 is closed, thus ~~to draw~~ causing the load side steering shaft S104 to drive the load. ~~as~~ As required, the output clutch CL101 is provided ~~at where~~ between the output side of the primary dynamo-electric unit E101 and ~~the fixed speed, or variable speed ratio or variable steering transmission~~ mechanism or planetary transmission mechanism T103. The output clutch CL101 is controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 41.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those

operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 50 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 49 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 49 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or alternatively, ~~a one-way or two-way alternatively~~ adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through ~~the fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft

S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101.

Fig. 51 shows that the preferred embodiment of Fig. 46 is provided with ~~a controllable clutch. Wherein, a centrifugal the~~ centrifugal clutch FC101 and another clutch CL102 ~~controlled by manual, mechanical, electromagnetic, hydraulic power-locking type of or hydraulic coupling type are~~ provided between the engine steering shaft S103 and the load side steering shaft S104 so as to execute power coupling or interruption on both of the engine steering shaft S103 and the load side steering shaft S104 ~~for the sysrem ro be equipped with a power locking type or hydraulic coupling type controllable clutch CL102 and engine throttle, to further acquire another specific function for the engine rotation power driven load.~~ The steering shaft S103 is either directly driven by the engine ICE101, or through ~~a fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T104, and is coupled to the drive ~~drawn~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is coupled to the driven ~~draw~~ side of the centrifugal clutch FC101. That is, once the steering shaft S103 on the side of the engine ICE101 reaches the preset rpm, the centrifugal clutch FC101 is forthwith closed to ~~draw~~ couple the load side steering shaft S104. The centrifugal clutch FC101 and the controllable clutch CL102 ~~is~~ are individually provided or ~~sharing~~ share the same structure, while the other units comprising the system are the same as those provided in the preferred embodiment illustrated in Fig. 46.

The combination of those structures described above for

the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 52 shows that the preferred embodiment of Fig. 51 is provided with an ~~output clutch. Wherein, the preferred embodiment taken from Fig. 51 being further provided with an~~ output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force is~~ disposed ~~at where~~ between the load side steering S104 driven by the primary dynamo-electric unit E101 and the load. When the output shaft CL101 is closed, it provides the same functions as those provided by the preferred embodiment given in Fig. 51; and when it is disengaged, the engine ICE101 simultaneously drives the primary dynamo-electric unit E101 and the secondary dynamo-electric unit E102 to operate as a generator or the primary dynamo-electric unit E101 is driven alone to operate as a generator and also provides additional functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 53 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 52 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the

differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 52 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or ~~alternatively, a one-way or two-way~~ alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The steering shaft S104 on the load side of the centrifugal clutch FC101 is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103 before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101, while providing the same functions as those provided in the preferred embodiment illustrated in Fig. 52.

Fig, 54 shows a first preferred embodiment of an application system that provides a one-way transmission mechanism between the load side steering shaft and the engine power source. ~~Wherein, the~~ The one-way transmission mechanism SWC101 is provided between the steering shaft S103 and the load side steering shaft S104 driven by the engine ICE101. When the rpm of the load side steering shaft S104 is higher than that of the steering shaft S103 driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T104, the one-way transmission mechanism SWC101 ~~is idling~~ idles without transmitting ~~the rotation~~ rotational kinetic energy, and the rpm of the steering shaft S103 driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission mechanism, or planetary~~ transmission mechanism T104 is higher than that of the load side steering shaft S104, ~~the rotation~~ The rotational kinetic energy from the steering shaft S103 is transmitted through the one-way transmission mechanism SWC101 to the load side steering shaft S104. The load side steering shaft S104 is provided for driving the load and the steering shaft S103 is driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T102 ~~is~~ provided on the load side steering shaft S104 to provide mutual transmission with the primary dynamo-electric unit E101 while the other units comprising the system are the same as those described in the preferred embodiment illustrated in Fig. 1.

The combination of those structures described above for the system are subject to control by the manual control interface

M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 55 shows a second preferred embodiment of an application system that provides a one-way transmission mechanism between the load side steering shaft and the engine power source. ~~Wherein, the~~ The one-way transmission mechanism SWC101 and the centrifugal clutch FC102 are provided between the steering shaft S103 and the load side steering shaft S104 driven by the engine ICE101. The steering shaft S103 is driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T104 and is coupled to the drive ~~draw~~ side of the centrifugal clutch FC102 ~~and~~ the load side steering shaft S104 ~~is couple~~ being coupled to the driven ~~draw~~ side of the centrifugal clutch FC102 so that when the rpm of the load side steering shaft S104 is higher than that of the steering shaft S103 driven by the ~~fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T104, the one-way transmission mechanism SWC101 ~~is idling~~ idles without transmitting ~~rotation~~ rotational kinetic energy, and the rpm of the steering shaft S103 driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission mechanism, or planetary~~ transmission mechanism T104 is higher than that of the load side steering shaft S104, ~~the rotation~~ The rotational kinetic energy from the steering shaft

S103 is transmitted through the one-way transmission mechanism SWC101 to the load side steering shaft S104. When the steering shaft S103 directly driven by engine ICE101, or through ~~the fixed speed ratio, variable speed ration or variable~~ transmission mechanism or planetary transmission mechanism T104, reaches its preset rpm, the centrifugal clutch FC102 is forthwith closed to ~~draw~~ couple the load side steering shaft S104. Alternatively, the ~~fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T102 is provided on the load side steering shaft S104 to provide mutual transmission with the primary dynamo-electric unit E101 while the other units comprising the system are the same as those described in the preferred embodiment illustrated in Fig. 21.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 56 shows a third preferred embodiment of an application system that provides a one-way transmission mechanism between the load side steering shaft and the engine power source, ~~Wherein, the fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ in which the transmission mechanism T102 given in the preferred embodiment illustrated in Fig. 55 is ~~jointly incorporated~~ joined to the intermediate steering

shaft S102 with the coupling surface on the outer circumference on the driven ~~draw~~ side of the centrifugal clutch FC102. Its intermediate layer is provided with a drive power-locking unit acting ~~outward~~ outwardly when the centrifugal force reaches its preset value. The intermediate layer is coupled to the steering shaft S103 driven by the engine ICE101, and the one-way transmission mechanism SWC101 selected for steering operation is provided ~~in~~ on the inner side to be coupled to the intermediate steering shaft S102 so to cut off the linkage to the load when the engine stops or runs at low rpm. The steering shaft S103 is directly driven or through the ~~fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T104, and is incorporated ~~to~~ with the drive ~~draw~~ side of the centrifugal clutch FC102, ~~and~~ the intermediate steering shaft S102 ~~is~~ being coupled to the driven ~~draw~~ side of the centrifugal clutch FC102 so that once the rpm of the intermediate steering shaft S102 is higher than that of the steering shaft S103 directly driven or driven through ~~the fixed speed ratio, variable speed ration or variable transmission mechanism or planetary~~ transmission mechanism T104, the one-way transmission mechanism SWC101 ~~is idling~~ idles without transmitting ~~rotation~~ rotational kinetic energy, and the rpm of the steering shaft S103 driven directly by the engine ICE101 or through ~~a fixed speed ratio, variable speed ration or variable transmission~~ mechanism, ~~or planetary~~ transmission mechanism T104 is higher than that of the load side steering shaft S104, ~~the rotation~~ The rotational kinetic energy from the steering shaft S103 is transmitted through the one-way transmission mechanism SWC101 to the intermediate steering shaft S102. The intermediate steering shaft S102 is directly outputted to the load, or alternatively via the load side steering shaft S104

before being outputted to the load by means of ~~an~~ optional output clutch CL301 ~~controlled by manual, mechanical, electromagnetic, or hydraulic force~~; or alternatively, via the steering shaft S105 for single axial output by means of the ~~fixed speed ratio,~~ variable speed ration or variable transmission mechanism or ~~planetary~~ transmission mechanism T102; or alternatively, through two units of differential steering shafts S105R and S105L for differential output by means of the transmission mechanism comprised of the differential gear set DG. The optional output clutch CL301 may be provided ~~at where~~ between the intermediate steering shaft S102, as described above, drawn by the power-locking coupling surface on the outer circumference of the centrifugal clutch FC102 and the load side steering shaft S104.

~~The~~ The intermediate steering shaft S102 is directly outputted to the load, or alternatively, to ~~an~~ output clutch CL301 ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the load; or as required, ~~to execute~~ executes single shaft output through ~~a fixed speed ratio or variable speed ratio, variable steering transmission or planetary~~ transmission mechanism T103, then through a steering shaft S105; or an optional transmission mechanism comprised of a differential gear set DG for differential output through two units of differential steering shafts S105R and S105L. ~~The~~ The additional output clutch CL301 is provided between the intermediate steering shaft S102 and the load side steering shaft S104 with both steering shafts driven by the power-locking coupling surfaces on the inner and outer circumferences of the double-acting centrifugal clutches FC101 and FC102, while the other unit comprising the system are the same with those described in

the preferred embodiment illustrated in Fig. 3~~1~~.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions same as those by the preferred embodiment given in Fig. 55 when the output clutch CL301 is closed; and when the output clutch CL301 is disengaged, ~~it~~ and provides functions related to those described in subparagraphs (1) through (10) or other specific function, it also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig, 57 shows a fourth preferred embodiment of an application system that provides a one-way transmission mechanism between the load side steering shaft and the engine power source. ~~Wherein, the~~ The dynamo-electric unit E101 and the load side steering shaft S104 ~~indicate~~ form a coaxial structure and the centrifugal clutch FC102 is provided between the primary dynamo-electric unit E101 and the engine ICE101. The driven ~~draw~~ side of the centrifugal clutch FC102 is incorporated to the load side steering shaft S104 coupled to the output shaft of the primary dynamo-electric unit E101 and the drive ~~draw~~ side of the centrifugal clutch FC102 is coupled to the steering shaft S103 driven by the engine ICE101. The one-way transmission mechanism SWC101 selected for steering operation is provided between the steering shaft S103 and the load side steering shaft S104. The drive ~~draw~~ side is provided with a drive power-locking unit acting ~~outward~~ outwardly once the centrifugal force reaches its preset value ~~thus~~ to provide the function of an output clutch jointly with the inner circumference coupling

surface for power-locking on the driven ~~draw~~ side. The engine ICE101 is directly incorporated or through the steering shaft S103 ~~driven by the fixed speed ratio, variable speed ratio or variable transmission mechanism or planetary~~ transmission mechanism T104, ~~to~~ the drive ~~draw~~ side of the centrifugal clutch FC101 while the load side steering shaft S104 is incorporated ~~to~~ the driven ~~draw~~ side of the centrifugal clutch FC101 so that once the rpm of the steering shaft S103 driven by the engine ~~Iee~~101 is higher than that of the load side steering shaft S104, ~~rotation~~ kinetic energy from the engine ICE101 drives the load side steering shaft S104 by means of the transmission from the one-way transmission mechanism SWC101, or when the steering shaft S103 driven by the engine ICE101 reaches its preset rpm, the centrifugal clutch FC102 is closed to couple the engine ICE101 and the load side steering side S104. As required, the output clutch CL101 is provided between the output side of the primary dynamo-electric unit E101 and the ~~fixed speed ratio, variable speed ratio, variable steering transmission mechanism or planetary~~ transmission mechanism T103. The output clutch CL101 is controlled by manual, mechanism, electromagnetic, hydraulic or centrifugal force while the other units comprising the system are the same as those described in the preferred embodiment illustrated in Fig. 4.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those

operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 58 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 57 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 57 is replaced by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or ~~alternatively, a one-way or two-way~~ alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The load side steering shaft S104 coaxial with the primary dynamo-electric unit E101 is driven by the controllable clutch CL102 ~~is~~ and directly outputted to the steering shaft S105 of the differential gear set DG, or through ~~the fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103, before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or~~

~~centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101.

Fig. 59 shows that the preferred embodiment illustrated in Fig. 54 of the present invention is provided with a ~~controllable clutch. Wherein, the~~ power-locking type or hydraulic coupling type controllable clutch CL102, ~~by manual, mechanical, electromagnetic or hydraulic force,~~ clutch CL102 and the one-way transmission mechanism SWC101 selected for steering operation of the preferred embodiment in Fig. 54 ~~are~~ being provided between the engine steering shaft S103 and the load side steering shaft S104 so to execute power coupling or interruption on both of the engine steering shaft S103 and the load side steering shaft S104. In turn, the system is provided with power-locking or hydraulic coupling type controllable clutch CL102 and the engine throttle to obtain another specific function of the load driven by the rotation power from the engine so that when the rpm of the load side steering shaft S104 is higher than that of the steering shaft S103 driven by the engine ICE101 and the one-way transmission mechanism SWC101 is idling, or the rpm of the steering shaft S103 is higher than that of the load side steering shaft S104, the engine ICE101 drives the output steering shaft S104 while the other units comprising the system are the same as those described in the preferred embodiment illustrated in Fig. 54.

The combination of those structures described above for the system are subject to control by the manual control interface M101, the central control unit CCU101, the drive control device

CD101 and the storage discharging device ESD101. The specific system structure described above provides functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also provides patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 60 shows that the preferred embodiment taken from Fig. 59 of the present invention is provided with an output clutch CL101 controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force. The output clutch CL101 is provided between the load side steering shaft S104 driven by the primary dynamo-electric unit E101 and the load. When the output clutch CL101 is closed, it provides the same functions as ~~those~~ provided by the preferred embodiment in Fig. 59. When the output clutch CL101 is disengaged, it provides additional functions including that it is separated from the load and leaves the engine ICE101 to simultaneously drive both of the primary dynamo-electric unit and the secondary dynamo-electric unit E102 to operate as a generator, or the primary dynamo-electric unit E101 is driven alone to operate as a generator, and provide functions related to those described in subparagraphs (1) through (10) or other specific function, ~~it~~ and also ~~provides~~ provide patterns related to those operation patterns described in A1 through A3 or other specific operation pattern.

Fig. 61 is a schematic view showing that the primary dynamo-electric unit in the preferred embodiment taken from Fig. 60 is replaced by two independent dynamo-electric units respectively provided on the side of two output shafts of the differential gear set. ~~Within, the~~ The primary dynamo-electric unit E101 of the preferred embodiment in Fig. 60 is replaced

by a primary dynamo-electric unit E101R to the right and another primary dynamo-electric unit E101L on the left. The primary dynamo-electric unit E101R to the right is directly connected in series with the steering shaft S105R to the right of the differential gear set DG, or ~~alternatively, a one-way or two-way~~ alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105R to the right of the differential gear set DG. The other primary dynamo-electric unit E101L on the left is directly connected in series with a steering shaft S105L to the left of a differential gear set DG or alternatively adapted with a one-way or two-way clutch CLU before being connected in series to the steering shaft S105L to the left of the differential gear set DG. The load side steering shaft S104 is coaxial with the primary dynamo-electric unit E101 driven by the controllable clutch CL102 and is directly outputted to the steering shaft S105 of the differential gear set DG, or through the ~~fixed or variable speed ratio or variable steering transmission or planetary~~ transmission mechanism T103, before being outputted to the steering shaft S105 of the differential gear set DG, or alternatively, by means of the output clutch CL101, ~~controlled by manual, mechanical, electromagnetic, hydraulic or centrifugal force~~ before being outputted to the steering shaft S105 of the differential gear set DG. Both ~~of~~ the primary dynamo-electric unit E101R to the right and the other primary dynamo-electric unit E101L on the left are subject to equal speed or differential drive by a drive control device CD101 having the same functions as those provided by the preferred embodiment in Fig. 60.

In the system, for those preferred embodiments illustrated

in Figs. 1~8, 22~37 and 39~61, the load is driven by the output directly from the steering shaft S103 or via the variable steering or planetary transmission mechanism T104 with fixed or variable speed ratio; and the originally disclosed load side steering shaft S104 is provided to be directly coupled, or coupled through the variable steering or planetary transmission mechanism T102 with fixed or variable speed ratio, to the primary dynamo-electric unit E101. Meanwhile, the output clutch CL101 driven by the load side steering shaft S104, the variable steering or planetary transmission mechanism T103 with fixed or variable speed ratio, and the load side device of the differential gear set DG can be all or partially reserved or removed.

Furthermore, in each of those preferred embodiments illustrated in Figs. 1~61, the load is driven by the output directly from the steering shaft S103 or via the variable steering or planetary transmission mechanism T104 with fixed or variable speed ratio, and the primary dynamo-electric unit E101 driven by the engine ICE101 operates as a generator; or the electric energy generated by the secondary dynamo-electric unit E102, which is driven directly by the electric energy from the storage discharging ESD101, ~~or from~~ by the engine, or ~~via the load is driven~~ by the output directly from the steering shaft S103, or via the variable steering or planetary transmission mechanism T101 with fixed or variable speed ratio, is controlled by the manual control interface M101, the central control unit CCU101, the drive control device CD101 for the primary dynamo-electric unit E101 to operate as a motor, thus to start the engine ICE101, or drive only the load with or without the engine ICE101.

As disclosed above, the ~~prevention of~~ drive motor speed

controlled compound power system and its devices are characterized ~~by~~ in that through the control of the operation of the engine ICE101 and the operation of both of the primary and the secondary dynamo-electric units E101 and E102 to function as a motor or a generator in conjunction with the primary centrifugal clutch FC101 or the secondary centrifugal clutch FC102, the one-way transmission mechanism SWC101 and other optional peripherals, ~~to be~~ subject to the control by the manual control interface M101, the central control unit CCU101, and the drive control device CD101, ~~to create~~ a variety of diversified operational functions are created ~~is~~ that are both innovative and practical. ~~Therefore this application is duly filed accordingly~~